

4.6

BIOLOGICAL RESOURCES²⁵

The analysis contained in this section is based on a site-specific biological report and tree survey prepared for the proposed project by *WRA* and *Hortscience*, respectively. The site-specific surveys were limited to those properties to which the City received property owner permission to access. The biological report is Appendix G of this EIR and the tree survey is Appendix H of this EIR. While the biological report contains information regarding the entire CVSP Area, the tree survey focuses only on the CVSP Development Area.

To evaluate the biological resources of the CVSP Area, a variety of methodologies were used: 1) literature and database reviews were completed to determine the documented or potential presence of special-status plant and wildlife species; 2) accessible portions of the CVSP Area were surveyed by wildlife biologists, botanists, and arborists; 3) special-status species surveys²⁶ were completed on accessible portions of the CVSP Area; and 4) a jurisdictional wetland delineation was prepared for accessible portions of the CVSP Area; and 5) inaccessible portions of the CVSP were evaluated at a reconnaissance-level by using aerial photographs and observing properties from public roadways.

4.6.1 Introduction and Regulatory Framework

As it relates to land use decisions, “biological resources” generally include plant and animal species and the habitats that support such species. Due to the importance of California’s native ecological systems from a biological, heritage, and economic standpoint, impacts on such resources - especially those that are rare or those with high ecological values - are considered an adverse environmental impact under CEQA.

Individual plant and animal species listed as rare, threatened or endangered under state and federal Endangered Species Acts, and the natural communities or habitats that support them, are of particular concern. Other sensitive, natural communities (such as wetlands, riparian woodlands, and oak woodland) that are critical to wildlife or ecosystem function are also key biological resources. It must be acknowledged that “special status” species lists are likely to change with additions and deletions over the approximately 40-year build-out period projected for the CVSP.

The avoidance and mitigation of significant impacts to biological resources under CEQA consistent with, and supplementary to, various federal, state, and local laws/regulations that are designed to protect such resources. These regulations often mandate that project sponsors obtain permits prior to the commencement of urban development activities, with measures to avoid and/or mitigate impacts required as permit conditions. Table 4.6-1 summarizes many of these laws and regulations; for more details please see Appendix G.

²⁵ In the following text, all plant and animal species are referred to using their common names. Readers wishing to view an expanded discussion that contains both the common and scientific/Latin names of the various species should refer to Appendix G.

²⁶ “Special-status” species include those that are listed as threatened or endangered under the Federal and/or California Endangered Species Acts. It also includes those identified by the California Department of Fish & Game (CDFG) as a California Species of Special Concern, as well as plants identified by the California Native Plant Society as rare, threatened, or endangered. The California Native Plant Society is a non-profit organization that maintains lists and a database of rare and endangered plant species in California. Plants in the California Native Plant Society’s “Inventory of Rare and Endangered Plants of California” are considered “Special Plants” by the California Department of Fish and Game Natural Diversity Database Program (CNDDB).

**TABLE 4.6-1
REGULATION OF BIOLOGICAL RESOURCES**

Law/Regulation	Objective(s)	Responsible Agencies
Federal Endangered Species Act	Prohibit the harassment and unauthorized take of such species and their habitat and, ultimately, to restore their numbers to where they are no longer threatened or endangered.	U.S. Fish & Wildlife Service (USFWS), NOAA's National Marine Fisheries Service (NMFS)
California Endangered Species Act		California Department of Fish & Game (CDFG)
Federal Migratory Bird Treaty Act	Protect migratory birds, including their nests & eggs.	USFWS
California Fish & Game Code Section 3503.5	Protect birds of prey, including their nests & eggs.	CDFG
Federal Clean Water Act	Avoid/mitigate impacts to wetlands and other "waters of the United States" including streams, lakes, or bays.	U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Regional Water Quality Control Board
Porter Cologne Act		
California Fish & Game Code Sections 1600-1616	Avoid/mitigate impacts to rivers, streams, or lakes.	CDFG
Santa Clara County Tree Protection Ordinance	Avoid/mitigate impacts to trees.	County of Santa Clara
San José Riparian Corridor Policy Study	Avoid direct & indirect impacts to riparian corridors.	City of San José
San José Municipal Code Chapter 13.32	Avoid/mitigate impacts to trees (diameter \geq 18 inches).	City of San José
NOAA = National Oceanic & Atmospheric Administration		

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating biological resource impacts resulting from planned development within the City. All future development addressed by this EIR will be subject to the biological resources policies listed in Chapter 4, *Goals and Policies*, of the City's General Plan, including the following:

- § *Urban Design Policy #24*: New development projects should preserve ordinance-size & other significant trees and mitigate where preservation is not feasible.
- § *Riparian Corridors and Upland Wetlands Policy #1*: Preserve creeks and natural riparian corridors whenever possible.
- § *Riparian Corridors and Upland Wetlands Policy #2*: New public and private development should be consistent with the City's Riparian Corridor Policy Study.
- § *Riparian Corridors and Upland Wetlands Policy #3*: New development should be designed to maintain setback and buffer from outside edge of riparian corridor.
- § *Riparian Corridors and Upland Wetlands Policy #4*: New development should be designed to protect riparian corridors from indirect effects of development.
- § *Riparian Corridors and Upland Wetlands Policy #5*: Require appropriate measures to restore creeks or riparian corridors if preserved.

- \$ *Species of Concern Policy #2*: Retain habitat areas of species of concern.
- \$ *Species of Concern Policy #4*: New development should preserve Burrowing Owl habitat.
- \$ *Urban Design Policy #17*: Development near creeks should incorporate native plant species into development near creeks.
- \$ *Water Resources Policy #8*: Establish should establish water pollution control measures.
- \$ *Urban Forest Policy #2*: Development projects should preserve native oaks, ordinance-size & other significant trees and mitigate where preservation is not feasible.

In addition to the policies of the City's General Plan and Riparian Corridor policy, the City is also participating in the Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) effort, as previously described in Section 3.0, *Consistency with Adopted Plans*. The CVSP is subject to the FESA/NEPA and CESA/CEQA and other applicable environmental regulations. The CVSP shall adequately compensate for all direct and indirect effects of the project, and will not preclude the development of a viable conservation strategy.

4.6.2 Existing Biological Resources

The CVSP Area is surrounded by the foothills of the Mt. Hamilton Range to the east, the Santa Cruz Mountains to the west, and urban areas of the City of San José and Morgan Hill to the north and south, respectively. The Mt. Hamilton Range and Santa Cruz Mountains contain large expanses of relatively undeveloped open space, and the Cities of San José and Morgan Hill are areas of urban and suburban type development, containing relatively little open space. The area is primarily rural and agricultural in nature, but also contains suburban housing developments, a golf driving range, and industrial and commercial development. Two perennial streams flow to the north through the CVSP Area; Coyote Creek and Fisher Creek. Coyote Creek flows on the eastern side of the Coyote Valley from Anderson Reservoir to San Francisco Bay. Fisher Creek flows from the foothills of the Santa Cruz Mountains in the south, to the confluence with Coyote Creek in the northern portion of the CVSP Area. Historically, it flowed along a more westerly course to Laguna Seca, a floodplain area in the northern portion of the CVSP Area, but was channelized and re-routed for agricultural purposes in the early 1900s.

4.6.2.1 *Biological Habitats*

The CVSP Area contains a variety of biological habitats, as shown in Table 4.6-2, and on Figure 4.6-1. Portions of the CVSP Area that were not accessible during ground surveys were assessed at a reconnaissance level from a distance and habitats present were mapped to the extent possible by reviewing aerial photographs.

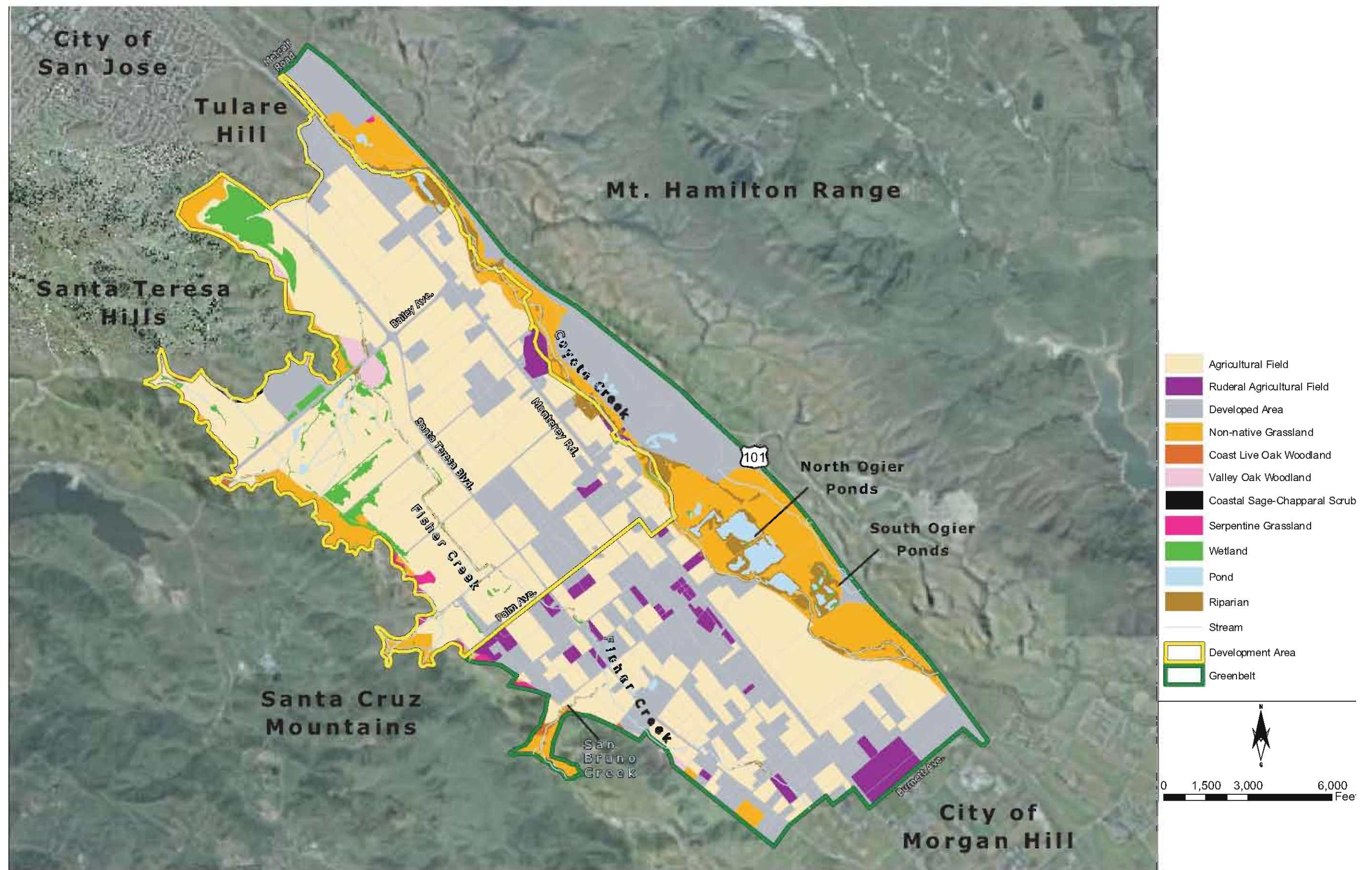
TABLE 4.6-2 BIOLOGICAL COMMUNITIES PRESENT IN THE CVSP AREA		
Community	Area (in acres)	Percent of the CVSP Area
Agricultural Fields	3,478	47
Ruderal Agricultural Fields	223	3
Developed Areas	2,182	30
Non-native Grassland	873	12
Coastal Sage-Chaparral Scrub	4	<0.1
Wetlands	148	2.2
Streams	70 (126,005 linear feet)	2
Ponds	116	1
Central Coast Cottonwood-Sycamore Riparian Forest	190	2.6
Central Coast Riparian Scrub	34	0.3
Coast Live Oak Woodland	15	0.2
Valley Oak Woodland	54	0.5
Serpentine Grassland	34	0.4
Total	7,421*	101.2%*
*Difference between areas of communities and area of CVSP Area represents overlap between riparian communities, ponds, and streams.		

Agricultural Fields

The majority of the CVSP Area (approximately 3,500 acres) is comprised of agricultural fields as shown in Table 4.6-2 and on Figure 4.6-1. Crops include peppers, beans, pumpkins, hay, orchard trees, and horticultural flowers and trees. Non-agricultural, weedy plant species that may be present in agricultural fields include prickly lettuce, black mustard, wild radish, yellow star-thistle, and Italian ryegrass. Avian species that may be found in agricultural fields include White-tailed Kite, Red-tailed Hawk, Loggerhead Shrike, Western Bluebird, Brewer's Blackbird, House Finch, Yellow-billed Magpie, and Scrub Jay. Agricultural fields do not, however, make very good long-term habitat for non-agricultural plant species or wildlife species due to the intensive management activities involved in farming. This habitat type is not regulated by any local, state, or federal agencies.

Ruderal Agricultural Fields

Approximately 223 acres of ruderal agricultural fields are located in the CVSP Area in areas that have been plowed for agricultural uses in the past, but are not currently used for agricultural purposes. Ruderal agricultural fields tend to be dominated by weedy non-native plant species such as Italian ryegrass, wild radish, prickly lettuce, sow thistle, and canary grass. Wildlife species present in this habitat are similar to those found on active agricultural lands. Ruderal agricultural fields provide some suitable foraging habitat for non-avian species due to reduced intensity of management. These species include California vole, and black-tailed jackrabbit. This habitat is disturbed from a biological standpoint and may be plowed occasionally and is therefore not ideal long-term habitat for sensitive wildlife and plant species. Although the wetlands found in some of the agricultural fields are highly regulated, as described below, this habitat type is not regulated by any local, state, or federal agencies.



BIOLOGICAL HABITATS IN THE CVSP AREA

FIGURE 4.6-1

Developed Areas

Approximately 2,200 acres of developed areas including residential uses, office parks, private businesses, warehouses, nurseries with enclosed greenhouse space, and industrial facilities are located within the CVSP Area. These areas often include landscaped surroundings with exotic ornamental vegetation such as annual bluegrass, English ivy, liquidambar, and laurel. Wildlife species present in developed areas include Northern Mockingbird, American Crow, European Starling, Anna's Hummingbird, Loggerhead Shrike, house mice, and several species of bats. Developed areas provide very limited habitat for plant and animal species due to high levels of human activity and landscape management. This habitat type is not regulated by any local, state, or federal agency.

Non-Native Grassland

Non-native grassland typically occurs in open areas of valleys and foothills throughout California and approximately 875 acres occurs within the CVSP Area. This habitat is typically dominated by non-native annual grasses and forbs growing with scattered native wildflowers. Common species within the CVSP Area include Italian ryegrass, Mediterranean barley, slender wild oat, fiddleneck, and soft chess. Wildlife species found in non-native grassland include Western Meadowlark, western fence lizard, western rattlesnake, California ground squirrel, California vole, coyote, and raptor species such as Northern Harrier and American Kestrel. The Western Burrowing Owl can also occur in this community. Non-native grassland habitat is relatively good habitat for wildlife and plant species, with values increasing adjacent to open space and agricultural fields, and decreasing adjacent to developed areas. This habitat type is not regulated by any local, state, or federal agencies.

Coastal Sage-Chaparral Scrub

Scrub and chaparral communities occur on approximately four acres within the CVSP Area. This habitat is comprised of dry soils, typically in areas of serpentine outcrops, with relatively sparse cover by overstory species such as California sagebrush, chamise, black sage, poison oak, and naked stem buckwheat. The understory is typically comprised of species found in surrounding non-native grasslands and serpentine grasslands. This habitat is home to a wide variety of small mammals and birds, including blacktailed jackrabbit, woodrats, pocket mice, deer mice, California Towhee, Song Sparrow, and other shrub-nesting birds. This habitat type is not regulated by any local, state, or federal agency.

Wetland and Open Water Habitats

This group of habitats includes aquatic areas such as coastal and valley freshwater marsh, seasonal wetland, freshwater seep, and streams and ponds. These areas are described as wetlands, streams, and ponds in Table 4.6-2 and include a total of approximately 334 acres. All of these habitats are considered sensitive by CDFG and are regulated by the USACE, RWQCB, or both. NMFS regulates essential fish habitat at the federal level. The final determination of wetlands is made by the USACE through issuance of a Jurisdictional Determination. It should be noted that a Jurisdictional Determination of wetlands was issued by the USACE on March 7, 2006 for accessible portions of the CVSP Development Area (Corps File No. 28814S). A Jurisdictional Determination is pending for a portion of the CVSP Development Area, south of Bailey Avenue (the Sobrato property). The acreages shown in Table 4.6-2 should be considered preliminary pending issuance of Jurisdictional Determinations for all parcels within the Development Area. Wetland and open water habitats within the CVSP Area are briefly described below.

Coastal and Valley Freshwater Marsh

Coastal and valley freshwater marsh habitats are located within the CVSP Area at the Ogier Ponds and in portions of Fisher and Coyote Creeks and their tributaries. These areas are dominated by common tule, broadleaf cattail, creeping spikerush, and some arroyo willow along the margins. Wildlife species that may occur within this habitat include California red-legged frog, bullfrog, and California red-sided garter snake.

Seasonal Wetlands

Seasonal wetland plant habitats occur in swales and depressions that are inundated during the rainy season for sufficient duration to support vegetation adapted to wetland conditions. Seasonal wetlands are the dominant wetland habitat, scattered throughout the CVSP Area with varying hydrological characteristics and plant habitats. Most of the seasonal wetlands are located in agricultural fields and are highly disturbed due to ditching and annual plowing and other types of ground disturbance. Plant species found within seasonal wetlands in the CVSP Area include Italian ryegrass, brown-headed and Mexican rush, and creeping spikerush. Amphibian and reptile species, including California tiger salamander and California red-legged frog may utilize seasonal wetlands as part of their dispersal corridor. In addition, many species of bats forage in seasonal wetlands.

Freshwater Seep

Freshwater seeps are wetlands that are permanently or seasonally inundated or saturated as a result of groundwater discharge. Only a few of these seeps are located within the CVSP Area, primarily on hillsides along the western and northern boundaries of the Development Area. Dominant plant species include seep monkeyflower, rabbitsfoot grass, Mexican rush, and California buttercup. Freshwater seeps provide suitable dispersal habitat for amphibian and reptile species.

Streams and Ponds

Streams and ponds are water bodies that contain an Ordinary High Water (OHW) mark with very little cover by wetland vegetation.²⁷ Coyote Creek and Fisher Creek, two perennial streams, are the major waterways through the CVSP Area. Coyote Creek flows northwest through the length of the CVSP Area between Monterey Road and Highway 101, ultimately flowing from Anderson Reservoir to San Francisco Bay. Coyote Creek has been modified in the vicinity of the CVSP Area to flow through the Ogier Ponds and through groundwater recharge basins north of Metcalf Road, as shown on Figure 1 of Appendix G. Fisher Creek flows northwest between Santa Teresa Boulevard and the foothills of the Santa Cruz Mountains in the southern and central portions of the CVSP Area. In the northern portion of the CVSP Area, it turns east to cross Santa Teresa Boulevard near Tulare Hill and joins Coyote Creek near Metcalf Road. Historically, Fisher Creek meandered through the valley into Laguna Seca, a floodplain area, most of which has since been drained for agricultural uses. Today, Fisher Creek is extensively channelized as it passes through the agricultural lands of the CVSP Development Area.

²⁷ The OHW mark is defined by the Army Corps of Engineers' regulations as: "...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." (Federal Register Vol. 51, No. 219, Part 328.3(d). November 1986.

These creeks, as well as adjacent stock ponds and small reservoirs provide suitable habitat for a wide variety of semi-aquatic to aquatic wildlife, waterfowl, and plant species. Typical aquatic species include fishes such as California roach, prickly sculpin, goldfish, blue gill, largemouth bass, green sunfish, and Louisiana red-swamp crayfish. Western pond turtle, bullfrog, and steelhead trout have been documented in Coyote Creek. Typical aquatic waterfowl may include Pied-billed Grebe, Wood Duck, Mallard, Black-Crowned Night Heron, American Coot, and Belted Kingfisher.

Central Coast Cottonwood – Sycamore Riparian Forest

Plant species found in the central coast cottonwood – sycamore riparian forest habitat of the CVSP Area include white alder, Fremont cottonwood, western sycamore, arroyo willow, California bulrush, narrowleaf cattail, and coyote brush. There are approximately 190 acres of this productive biological habitat in the CVSP Area. This habitat also supports a large, diverse number of wildlife species including numerous amphibian and reptile species such as Pacific treefrog, California red-sided garter snake, and numerous small birds and mammals such as House Wren and the San Francisco dusky-footed woodrat. This habitat is regulated by CDFG through the Streambed Alteration Program.

Central Coast Riparian Scrub

Central coast riparian scrub habitat within the CVSP Area (approximately 34 acres) is dominated by arroyo willow, coyote brush, some valley oaks, Italian thistle, poison hemlock, and non-native annual grasses. Similar to central coast cottonwood – sycamore riparian forest habitat, this habitat supports a large community of wildlife species, such as those listed in the section above. Fewer plant species are present due to the high cover by willows. This habitat is regulated by CDFG through the Lake and Streambed Alteration Program.

Serpentine Grassland

Approximately 34 acres of serpentine grassland are located within the CVSP Area; however, more expansive areas are located in the hills to the west and north of the Development Area. Abundant serpentine grassland is also located on the slopes east of Highway 101 in the foothills of the Mt. Hamilton Range. Serpentine grassland in the San Francisco Bay Area is dominated by non-native annual grasses together with native and non-native forbs such as soft chess, Italian ryegrass, California poppy, dwarf plantain, Indian paintbrush, and fiddleneck. This habitat type in the Santa Clara Valley also contains a variety of sensitive plant and animal species including the Bay checkerspot butterfly. This habitat is considered to be sensitive by CDFG and USFWS.

Coast Live Oak Woodland

Approximately 15 acres of coast live oak woodland habitat are located in the foothills of the Santa Cruz Mountains, extending into small portions of the CSVP Area. This woodland is comprised of dense stands of coast live, valley, and blue oaks, often on slopes greater than ten percent and in swales on hillsides. The understory consists of non-native grasses, and associated woodland tree and shrub species such as California buckeye, poison oak, California bay, and toyon. Oak woodland provides nesting and foraging habitat for numerous wildland species including over 100 species of birds, as well as many species of bats. Deer, squirrels, woodpeckers, quail, and turkeys are dependent on acorns produced by oaks as a primary food source. Impacts to oak woodlands are included in the CEQA process per California State Senate Bill 1334.

Valley Oak Woodland

Approximately 54 acres of valley oak woodland habitat are located in the CVSP Area. This habitat occurs as open canopied savannah with valley oaks typically the only tree present in the overstory, and grassland and sub-shrub species such as poison oak, Italian ryegrass, and wild oats in the understory. In the CVSP Area, valley oak woodland often occurs as relatively open canopied areas on zero to ten percent slopes adjacent to denser areas of live oak woodland. Valley oak woodland provides food, cover, and nesting habitat for numerous bird species including Red-shouldered Hawk, California Quail, Plain Titmouse, Bushtit, and Acorn Woodpecker. A variety of mammals also depend on valley oaks for food and cover, including mule deer, fox, and western gray squirrels. Impacts to oak woodlands are included in the CEQA process per California State Senate Bill 1334. Valley oak woodland habitat is considered a sensitive community by CDFG.

4.6.2.2 *Special Status Plants and Animals*

Based on a review of background literature,²⁸ the potential for special status plant and animal species to occur within and surrounding the CVSP Area was evaluated. Areas adjacent to the CVSP Area were also reviewed to determine the potential for the proposed project to indirectly impact special status species. Special-status plant surveys were completed on parcels that were accessible at the time the surveys were done. Table 4.6-3 includes species that are present, or have a moderate to high potential of being present within the CVSP Area. Appendix G describes in detail all plant and animal species included in the analysis of species of special concern. The approximate locations of special status species within and adjacent to the CVSP Area are shown on Figures 4.6-2 and 4.6-3. The accuracy of these surveys will diminish over the time necessary to build out the CVSP such that subsequent updates may be necessary on a species- or site-specific basis.

Special Status Plant Species

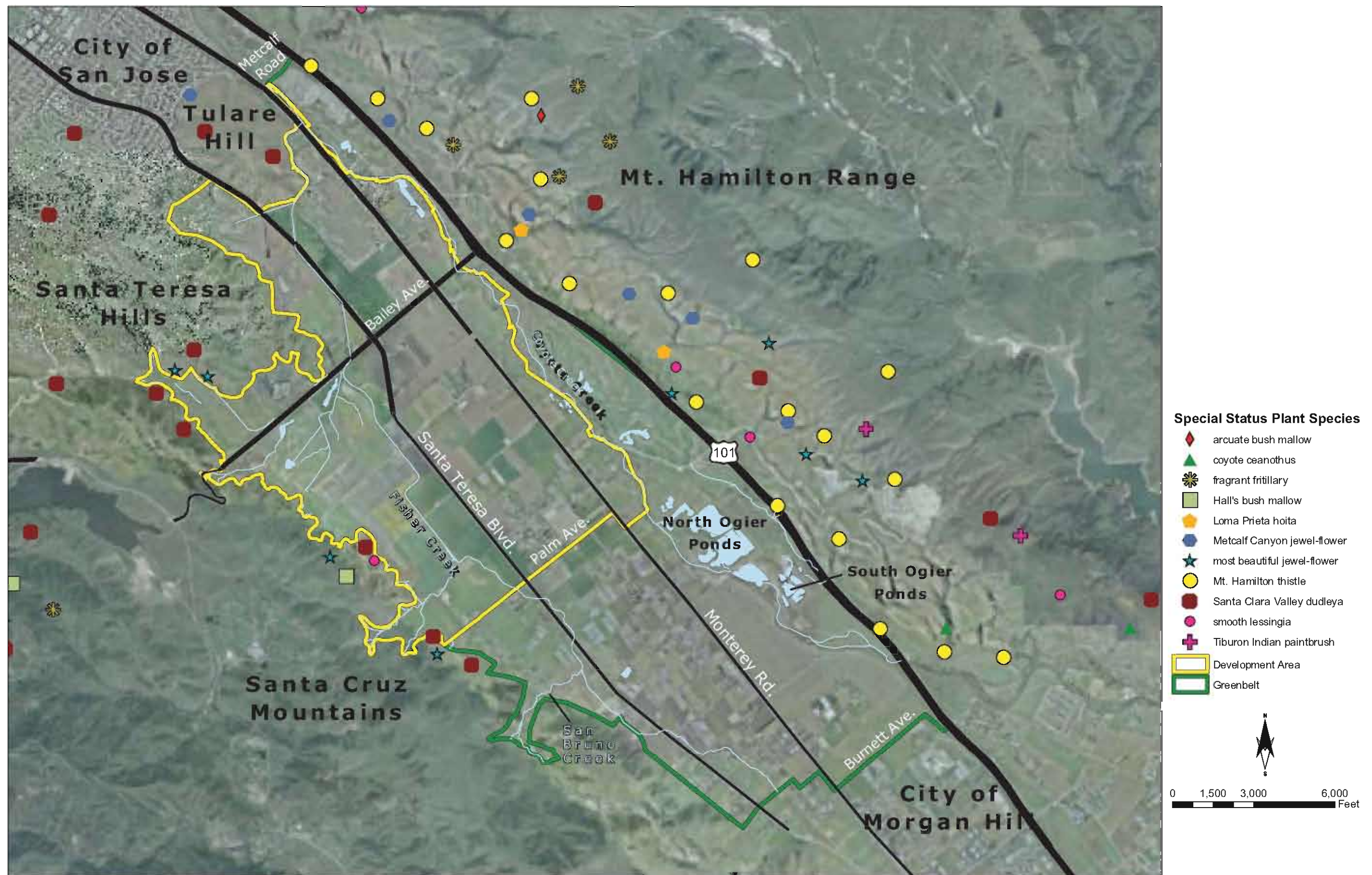
As previously described, the majority of the CVSP Area is agricultural in nature (actively farmed) with some areas of urban development. These areas do not provide suitable habitat for most rare plant species. Only one special status plant species (Mt. Hamilton thistle) was observed within the CVSP Area, while an additional four species have a moderate potential to occur. These species are summarized in Table 4.6-3.

Special Status Animal Species

A total of 20 special status wildlife species are either documented to occur or have a high potential of occurring within the CVSP Area. These species are listed in Table 4.6-3, below. An additional 18 species were investigated and were found to have a moderate potential to occur, or are not present within the CVSP Area. These species are described in Appendix G and are not included in Table 4.6-3.

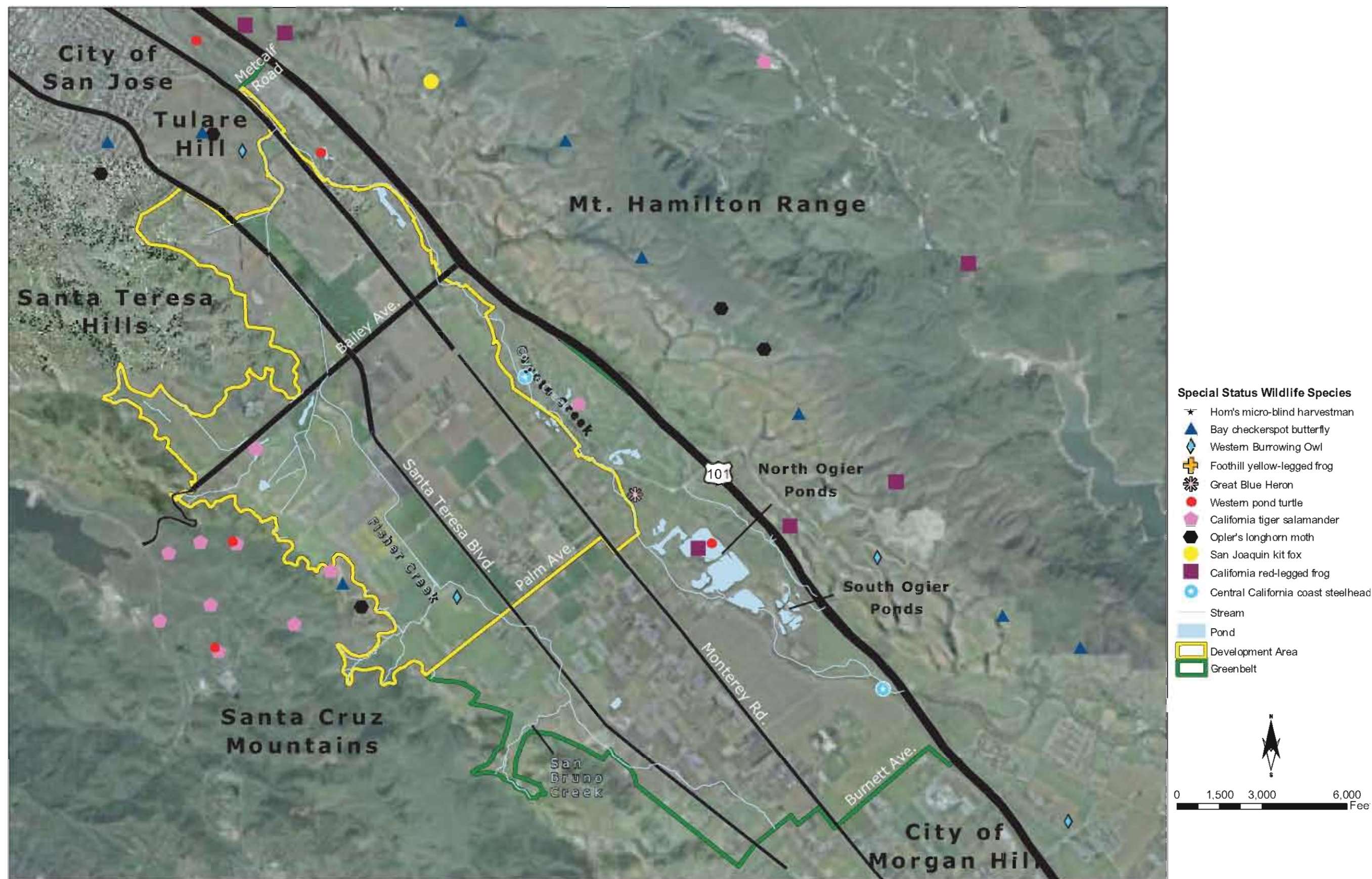
It should be noted that while Bay checkerspot butterflies are documented to occur in the foothills of the Santa Cruz Mountains, Tulare Hill, and in great numbers in the serpentine hillsides of the Mt. Hamilton Range, there is only a moderate potential that this species occurs within the CVSP Area. USFWS has designated critical habitat units for Bay checkerspot butterfly, small portions of which are within the CVSP Area (refer to Figure 5 of Appendix G). These areas however, consist of developed land and agricultural fields and do not contain butterfly larval host plants or adult butterfly nectar plants. Therefore, suitable habitat for Bay checkerspot butterfly does not exist within the

²⁸ See Appendix G for a complete list of literature resources used in this evaluation.



APPROXIMATE LOCATIONS OF SPECIAL STATUS PLANT SPECIES WITHIN & ADJACENT TO THE CVSP AREA

FIGURE 4.6-2



APPROXIMATE LOCATIONS OF SPECIAL STATUS WILDLIFE SPECIES WITHIN & ADJACENT TO THE CVSP AREA FIGURE 4.6-3

critical habitat areas of the CVSP Area, although they may occasionally fly through the area from adjacent areas of suitable habitat. Impacts to this species in terms of nitrogen deposition are described in Section 4.6.3.7.

**TABLE 4.6-3
SUMMARY OF POTENTIAL FOR SPECIAL STATUS SPECIES
TO OCCUR WITHIN OR ADJACENT TO THE CVSP AREA***

Species	Regulatory Status	Potential To Occur
<i>P L A N T S</i>		
Mt. Hamilton Thistle	CNPS List 1B	Present. Found within the Greenbelt and known to occur in the Mt. Hamilton Range. Species was not present on other accessible CVSP properties during protocol level rare plant surveys.
Bent-flowered Fiddleneck	CNPS List 1B	Moderate Potential. Suitable habitat exists in the Greenbelt along Coyote Creek. Species was not present in the CVSP Area during protocol level rare plant surveys on accessible properties.
Big-scale Balsamroot	CNPS List 1B	Moderate Potential. Open areas within riparian and grassland areas in the Greenbelt may provide suitable habitat. Species was not present in the CVSP Area during protocol level rare plant surveys on accessible properties.
Bristly sedge	CNPS List 2	Moderate Potential. Areas along Coyote Creek may provide suitable habitat. Species was not present in the CVSP Area during protocol level rare plant surveys on accessible properties.
Wooly-headed Lessingia	CNPS List 3	Moderate Potential. Suitable valley and foothill grassland habitat exists within portions of the CVSP Area; however, species was not present during protocol level rare plant surveys on accessible properties.
<i>A N I M A L S</i>		
Bay Checkerspot Butterfly	FT	Moderate Potential. Designated habitat is present surrounding the CVSP Area. Known populations present in foothills to the west, east, and north of the CVSP Area. Dwarf plantain is the primary host plant. May occasionally fly through portions of the CVSP Area. Very little suitable breeding habitat is present in the CVSP Area.
Central California Coastal Steelhead	FT, CDFG-SC, NMFS	Present. Occurs in Coyote Creek upstream and downstream of Metcalf Dam. Coyote Creek is considered critical habitat for steelhead. Not known to occur in Fisher Creek due to barriers and inadequate habitat.
California Tiger Salamander	FT, CDFG-SC	Present. Known to occur immediately adjacent to the CVSP Area, in the Santa Cruz Mountains. Occurrences of this species have been documented within the CVSP Area at the Coyote Creek Golf Course and along Bailey Avenue. Suitable habitat is present within the CVSP Area.

**TABLE 4.6-3
SUMMARY OF POTENTIAL FOR SPECIAL STATUS SPECIES
TO OCCUR WITHIN OR ADJACENT TO THE CVSP AREA***

Species	Regulatory Status	Potential To Occur
California Red-legged Frog	FT, CDFG-SC	Present. Known to occur in tributaries of Coyote Creek and at several locations within five miles of the CVSP Area. Documented in the Ogier Ponds. Surveys of accessible areas of CVSP Area found no CRLF in any potential breeding habitat locations; however, potential habitat may be located in inaccessible areas of Development Area, both north and south of Bailey Avenue.
Western Pond Turtle	CDFG-SC	Present. Known to occur in Coyote Creek, Fisher Creek, and other ponds/wetland areas throughout the CVSP Area.
Coast Horned Lizard	CDFG-SC	Moderate Potential. Suitable habitat is located adjacent to the CVSP Area in the Santa Teresa hills.
Great Blue Heron	SLC	Present. Known to occur, nest, and forage in riparian habitats along Coyote Creek.
Long-billed Curlew	USFWS-BCC CDFG-SC	Present. Observed in Development Area. Occasional winter forager to Santa Clara County.
Tricolored Blackbird	USFWS-BCC, CDFG-SC, SLC	Present. Known to occur. Suitable foraging and nesting habitat is located along Coyote and Fisher Creeks.
Western Burrowing Owl	USFWS-BCC, CDFG-SC, SLC	Present. Nesting pair observed in southwestern portion of the Development Area. Foraging habitat available throughout the CVSP area.
Golden Eagle	CDFG-SC, CDFG-FPS, SLC, USFWS-BCC	Present. Observed soaring over the southern portion of the CVSP Area. Suitable foraging habitat is available in grasslands and open habitat within the CVSP Area. Limited suitable nesting habitat within the CVSP Area. The nearest known nesting site for Golden Eagle is near Anderson Reservoir, approximately two miles to the south of the CVSP Area.
Cooper's Hawk	CDFG-SC, SLC	High Potential. Suitable nest habitat is present in Coyote Creek and Fisher Creek riparian areas.
White-tailed Kite	CDFG-FPS	Present. Common in CVSP Area with breeding habitat located throughout.
Northern Harrier	CDFG-SC SLC	Present. Found throughout the CVSP Area especially in agricultural areas. May breed in undisturbed grassland habitat within the CVSP Area.
California Thrasher	SLC	Present. Observed in CVSP Area near Coyote Creek. Suitable habitat is located within the CVSP Area.
Loggerhead Shrike	USFWS-BCC, CDFG-SC, SLC	Present. Observed throughout and assumed to breed in CVSP Area.
Yellow Warbler	CDFG-SC, SLC	Present. Observed in CVSP Area, particularly in riparian habitats.

TABLE 4.6-3 SUMMARY OF POTENTIAL FOR SPECIAL STATUS SPECIES TO OCCUR WITHIN OR ADJACENT TO THE CVSP AREA*		
Species	Regulatory Status	Potential To Occur
Saltmarsh Common Yellowthroat	USFWS-BCC, CDFG-SC, SLC	Present. Observed along Coyote Creek. Suitable breeding habitat is located in riparian areas.
California Horned Lark	CDFG-SC, SLC	High Potential. Expected to be present in the grassland and agricultural habitats throughout the CVSP Area.
San Francisco Dusky-footed Woodrat	CDFG-SC	Present. Present along Coyote and Fisher Creeks.
Pallid Bat	CDFG-SC, SLC, High Priority	High Potential. Although this species is not known to be present, suitable tree, bridge, and building roost sites available throughout the CVSP Area, especially along Coyote Creek.
Yuma Myotis (bat)	SLC	High Potential. Although this species is not known to be present, suitable roost and forage habitat available within the CVSP Area, along Coyote Creek, and in barns and outbuildings in urban areas.
<p>* For detailed information, refer to Appendix H.</p> <p style="text-align: center;"><u>Notes:</u></p> <p><i>Plants:</i> CNPS = California Native Plant Society CNPS List 1B = Plant rare, threatened, or endangered in California and elsewhere CNPS List 2 = Plant rare, threatened, or endangered in California, but more common elsewhere CNPS List 3 = Plants about which more information is needed, a review list</p> <p><i>Animals:</i> FE = Federally Endangered FT = Federally Threatened USFWS-BCC = Federal Birds of Conservation Concern NMFS = Species under the jurisdiction of the National Marine Fisheries Service</p> <p style="text-align: right;"> CDFG-SC = California Species of Special Concern ST = State Threatened CDFG-FPS = California Fully Protected Species SLC = Species of Local Concern High Priority = Western Bat Working Group (WBWG) High Priority or Imperiled Species </p>		

4.6.2.3 *Existing Trees within the CVSP Development Area*

A tree survey was prepared for the accessible parcels of the CVSP Development Area for tree species over six inches in diameter, excluding orchard trees, as shown on Figures 4.6-5 through 4.6-18. Trees within the Greenbelt Area were not surveyed because urban development is not proposed for this area. Tree surveys of the Greenbelt Area would be required for any future uses including the installation of groundwater recharge basins or use as agricultural mitigation. Trees within the CVSP Development Area were found to be growing in a variety of circumstances including residential landscape, streetscape, semi-rural farmstead, commercial and agricultural, riparian, and oak woodland settings. The accuracy of these surveys will diminish over the time necessary to build out the CVSP such that subsequent updates may be necessary as trees grow or die.

Non-orchard tree species over six inches in diameter were identified and measured, and evaluated for overall health and structural condition. Orchard trees are generally not included in these tree surveys because they are considered a “crop” which can be removed at the property owner’s discretion and as

such, are not considered a biological resource. Trees were measured at 24 inches above ground surface, in conformance with the City of San José's Tree Ordinance. Approximately 2,190 trees were surveyed within accessible areas: 1,302 had diameters greater than six but less than 18 inches, and 888 trees were over 18 inches in diameter ("ordinance-size" trees according to the City of San José).

Trees surveyed are shown on Figures 4.6-5 through 4.6-18. A total of 151 different tree species were identified with the most frequently occurring species being the valley oak. Seven of the 151 species identified were native species including California black walnut, California buckeye, coast live oak, Fremont cottonwood, valley oak, and western sycamore. Native trees have a higher biological value than non-native trees because they are indigenous to this area, and as such, are more resistant to insects and disease and are adapted for long-term survival in California's soil and climate.

Table 4.6-4 summarizes the most prevalent species of ordinance-size trees within the CVSP Development Area by number, general location, and health. Other species include, but are not limited to Italian stone pine, London plane, elderberry, California pepper, and Mexican palm fan. The entire tree survey is contained in Appendix H.

TABLE 4.6-4: SUMMARY OF ORDINANCE-SIZE TREES WITHIN THE CVSP DEVELOPMENT AREA*			
Species	Number (% of total)	General Location	General Health
Valley Oak ^o	180 (20%)	Occurs largely on undeveloped sites used for grazing and was also the dominant species in rows separating agricultural fields.	In generally good condition and well adapted to the environment.
California Black Walnut ^o	109 (12%)	Occurs primarily in remnant commercial or domestic orchards associated with current or former home sites. Occasionally located in rows separating agricultural fields or near drainage ditches.	Variable conditions.
Coast Redwood	102 (11%)	Occurs primarily in residential landscapes just to the north of Palm Avenue and on the east side of Monterey Road. Often placed to provide screening and shade.	In generally good condition even when mature, and evidently well-adapted despite high summer temperatures.
Beefwood	57 (6%)	Occurs primarily in the northern portion of the development area.	In generally fair condition. Many have been pruned to clear overhead utility lines.
Coast Live Oak ^o	51 (6%)	This versatile tree grows in a variety of settings including residential, in rows of mature trees, and in riparian corridors.	In generally good condition and well adapted to the area.
Manna Gum	49 (6%)	Occurs as entry feature on the north side of Bailey Avenue, on either side of Santa Teresa Boulevard, and between Santa Teresa and Monterey Road.	In generally good condition.

TABLE 4.6-4: SUMMARY OF ORDINANCE-SIZE TREES WITHIN THE CVSP DEVELOPMENT AREA*			
Species	Number (% of total)	General Location	General Health
Monterey Pine	39 (4%)	Located on residential sites, primarily north of Palm Avenue and on the east side of Monterey Road.	In generally fair condition with older trees beginning to decline in health and age.
English Walnut	33 (4%)	Located in commercial and domestic orchards, primarily east of Monterey Road.	In generally fair to poor condition due to a lack of care and irrigation.
Red Willow ^o	33 (4%)	Located primarily in riparian corridors.	In generally fair to poor condition due to trunk and branch failures. Do not appear to be regenerating.
* Trees with diameters of 18 inches or greater. ^o Native tree species.			

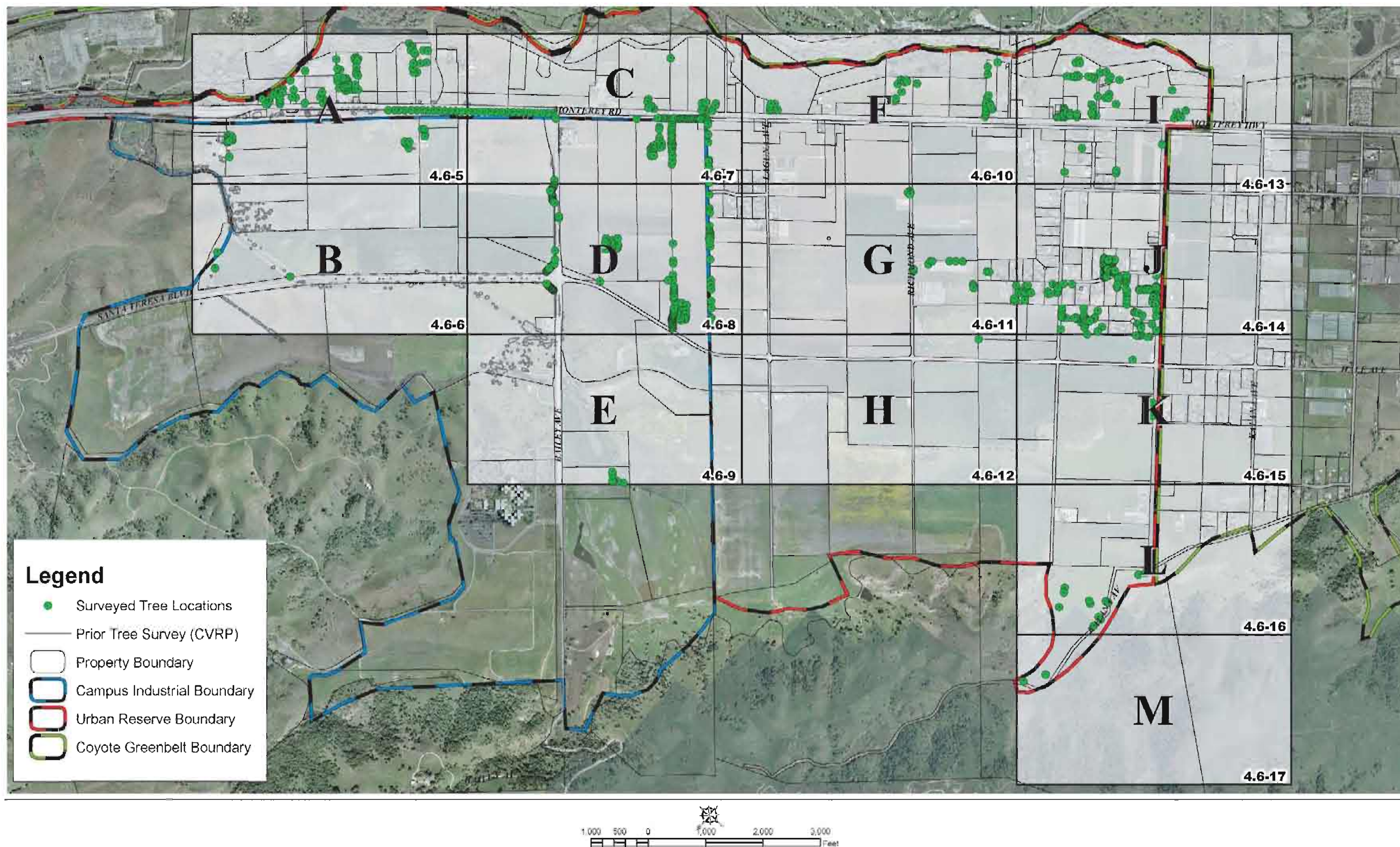
There are also notable groupings of trees in the CVSP Development Area. These groupings include street trees on Santa Teresa Boulevard north of Bailey Avenue and on the north side of Bailey Avenue between Santa Teresa Boulevard and Monterey Road. These trees were planted in anticipation of the development of the North Coyote Campus Industrial area.

As previously described in Section 4.5, *Cultural Resources*, forty-three California black walnuts are located on the west side of Monterey Road within the Development Area. These notable trees were planted around the turn of the century by Horace G. Keesling to provide shade along the heavily traveled Monterey Road, and are commonly known as the “Keesling walnuts.” They are generally in good condition, although their health is beginning to decline as they age. These trees could live a maximum of 200 years.²⁹ Four of the trees are in poor condition and one appears to be dead. These trees are designated by the City of San José as Heritage Trees (Municipal Code Sections 13.28.330 and 13.32.090). Other potential Heritage Trees could also be located within the CVSP Development Area.

4.6.2.4 *Existing Wildlife Corridors*

Wildlife movement between suitable habitat areas can occur via landscape linkages, referred to as wildlife movement corridors. Natural characteristics, such as topography and changes in vegetation, and human activities, such as urbanization and road development, however, can affect the ability of wildlife species to move through these corridors. Natural or man-made barriers that restrict or prevent wildlife movement between areas of suitable habitat (i.e. core habitat areas) can have lasting effects on genetic exchange and the long-term sustainability of wildlife populations, sometimes resulting in species extinction or the development of new species or sub-species. The presence of barriers to wildlife movement, whether natural or man-made, can result in the isolation of wildlife populations and the fragmentation of core habitat areas. Loss of habitat connectivity has been implicated in the reduction of species diversity and as a contributing factor to species extinctions (Hilty, et al. 2006).

²⁹ Jim Clark, certified arborist, personal communication, January 2007.



TREE SURVEY INDEX MAP

FIGURE 4.6-4



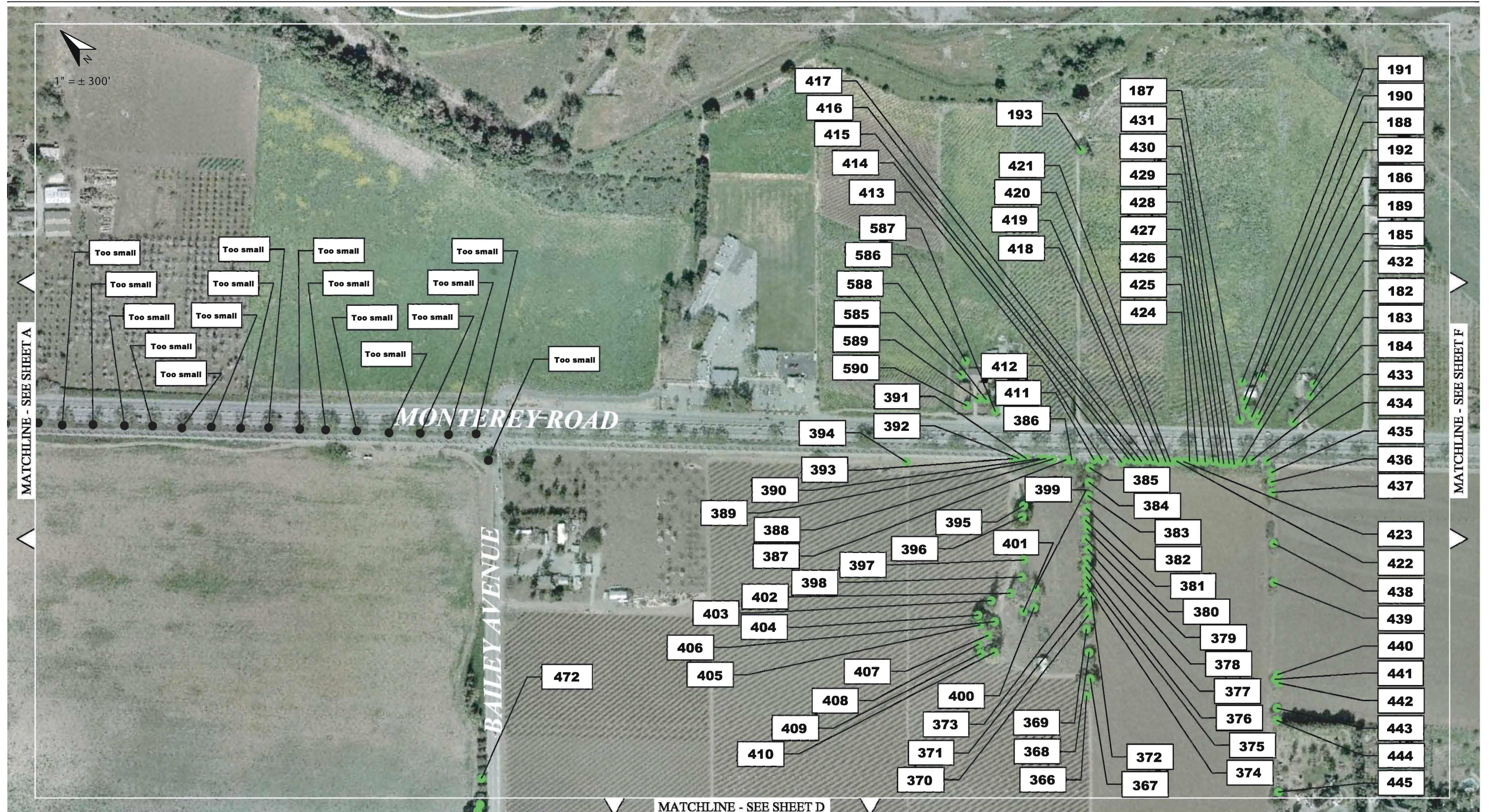
TREE SURVEY MAP A

FIGURE 4.6-5



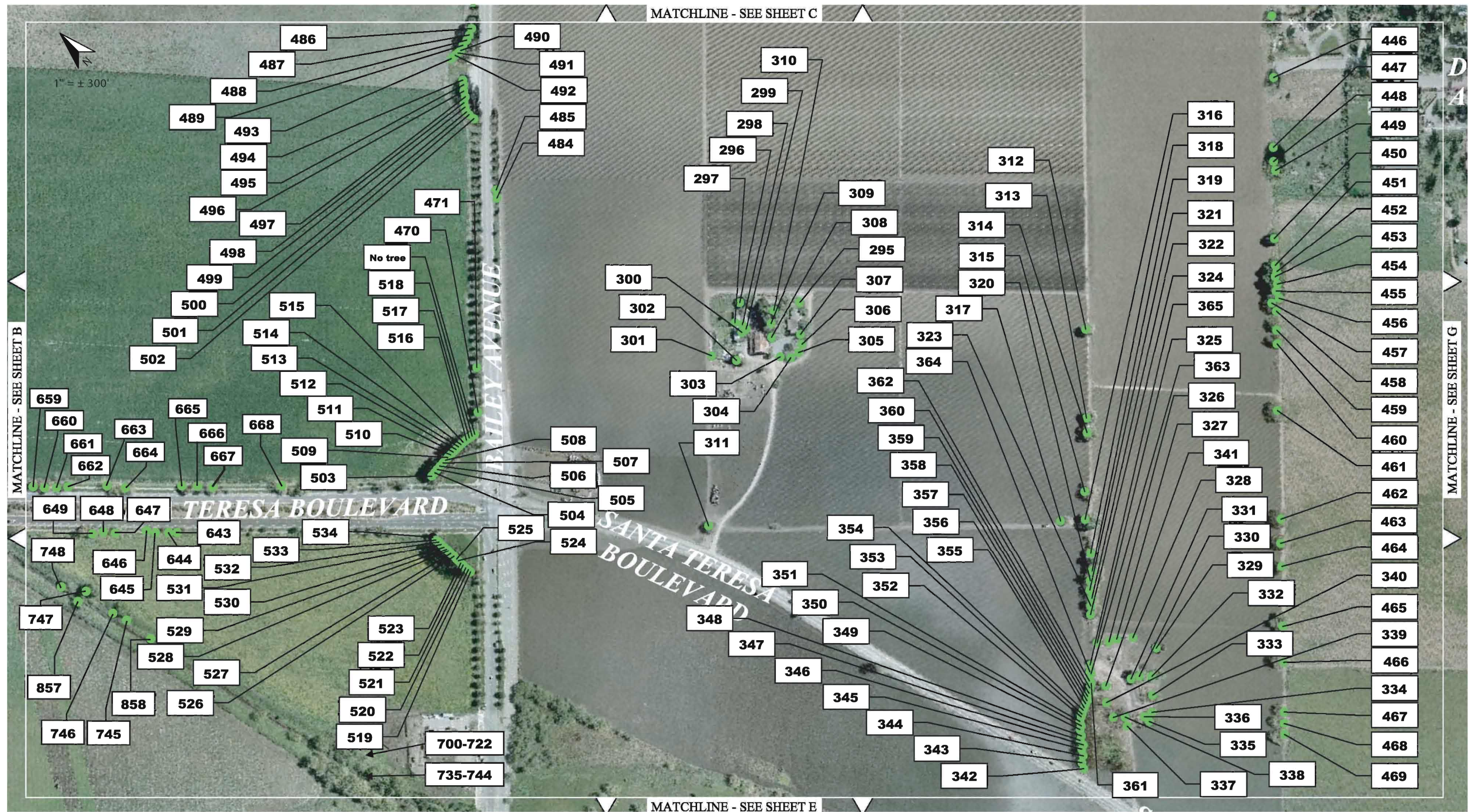
TREE SURVEY MAP B

FIGURE 4.6-6



TREE SURVEY MAP C

FIGURE 4.6-7



TREE SURVEY MAP D

FIGURE 4.6-8



TREE SURVEY MAP E

FIGURE 4.6-9



TREE SURVEY MAP F

FIGURE 4.6-10



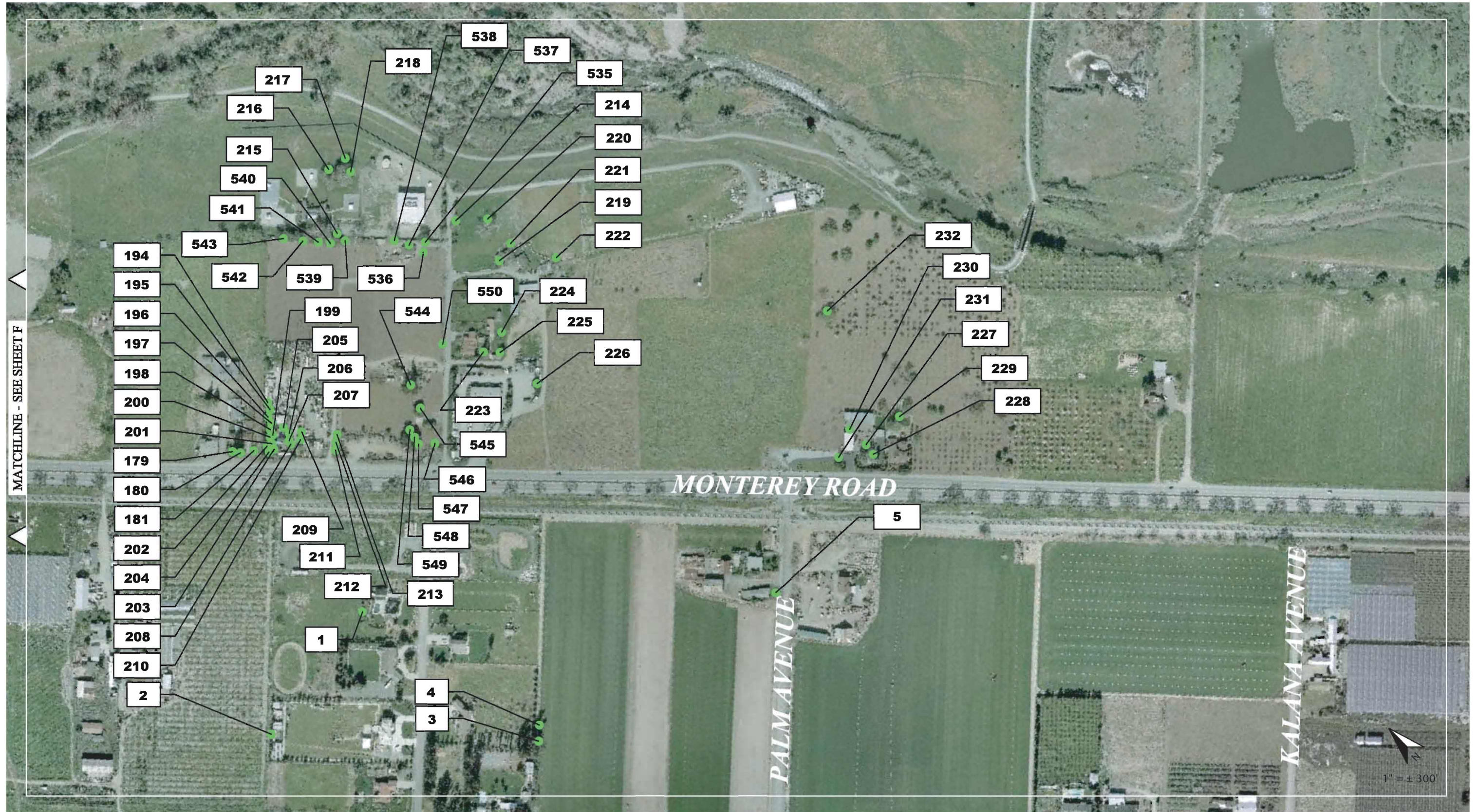
TREE SURVEY MAP G

FIGURE 4.6-11



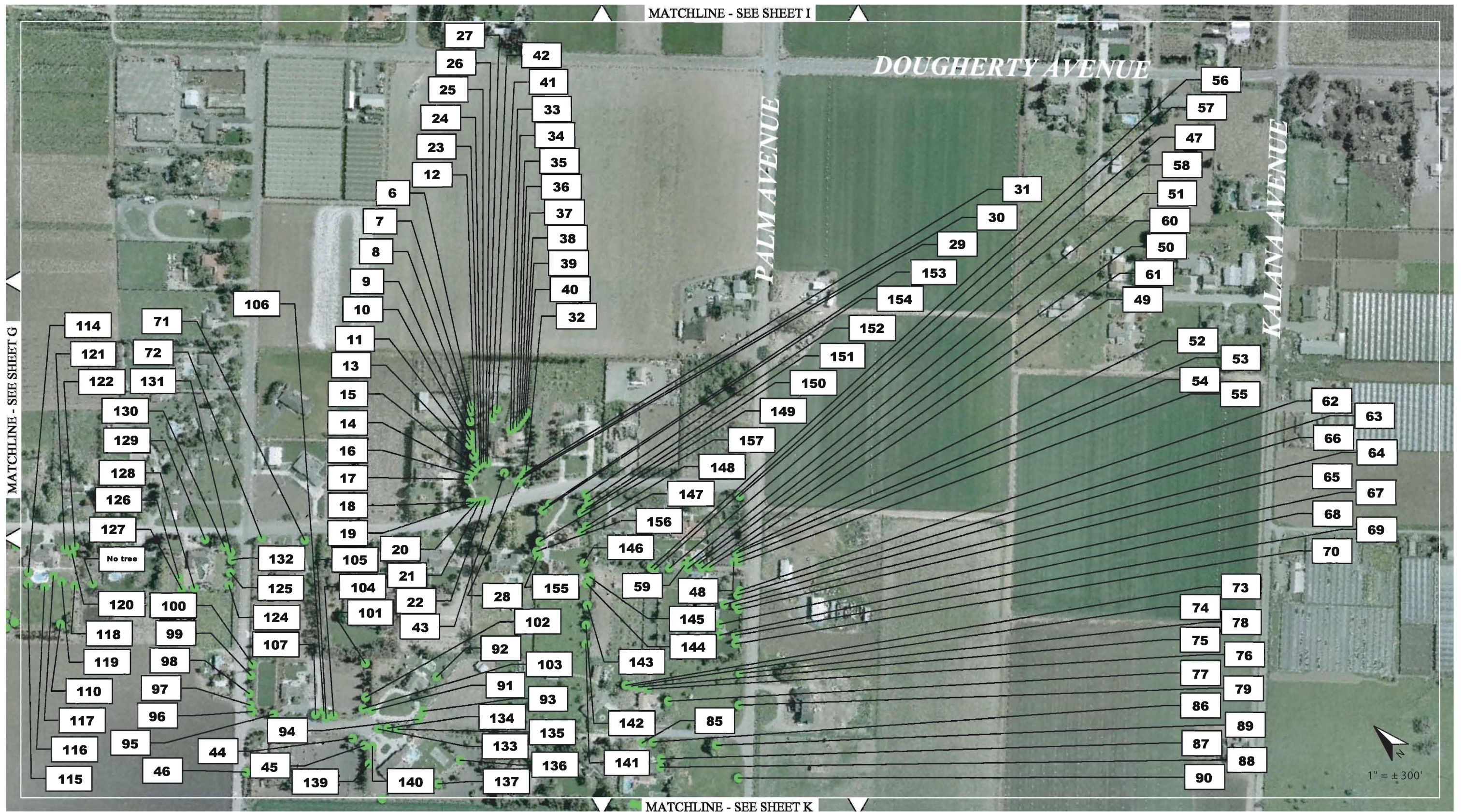
TREE SURVEY MAP H

FIGURE 4.6-12



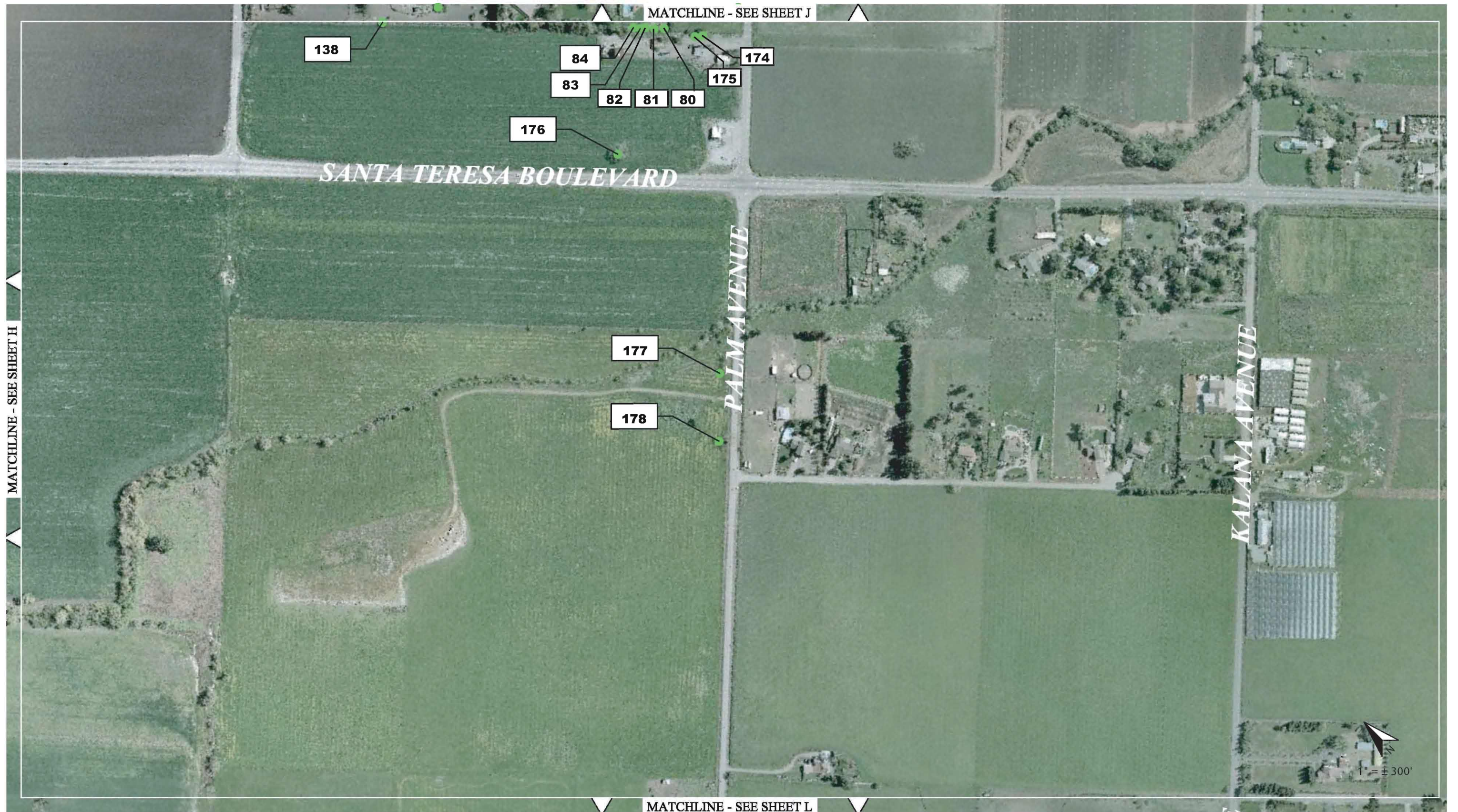
TREE SURVEY MAP I

FIGURE 4.6-13



TREE SURVEY MAP J

FIGURE 4.6-14



TREE SURVEY MAP K

FIGURE 4.6-15



TREE SURVEY MAP L

FIGURE 4.6-16



TREE SURVEY MAP M

FIGURE 4.6-17

Wildlife movement corridors can reduce the effects of habitat fragmentation by allowing animals to move between core habitats, replenishing depleted populations, maintaining diversity in the gene pool, and contributing to plant diversity by transporting seed and pollen. Corridors also provide escape routes from fire, predators and human disturbances, and serve as travel pathways for accessing food, water, and mates. Wildlife movement can also have negative effects, such as facilitation of the passage of disease, introduction of invasive species, introduction of “poorly” suited genes, and increased predation on depleted populations. The benefits of increased wildlife movement, however, are generally accepted as outweighing these potential negative impacts.

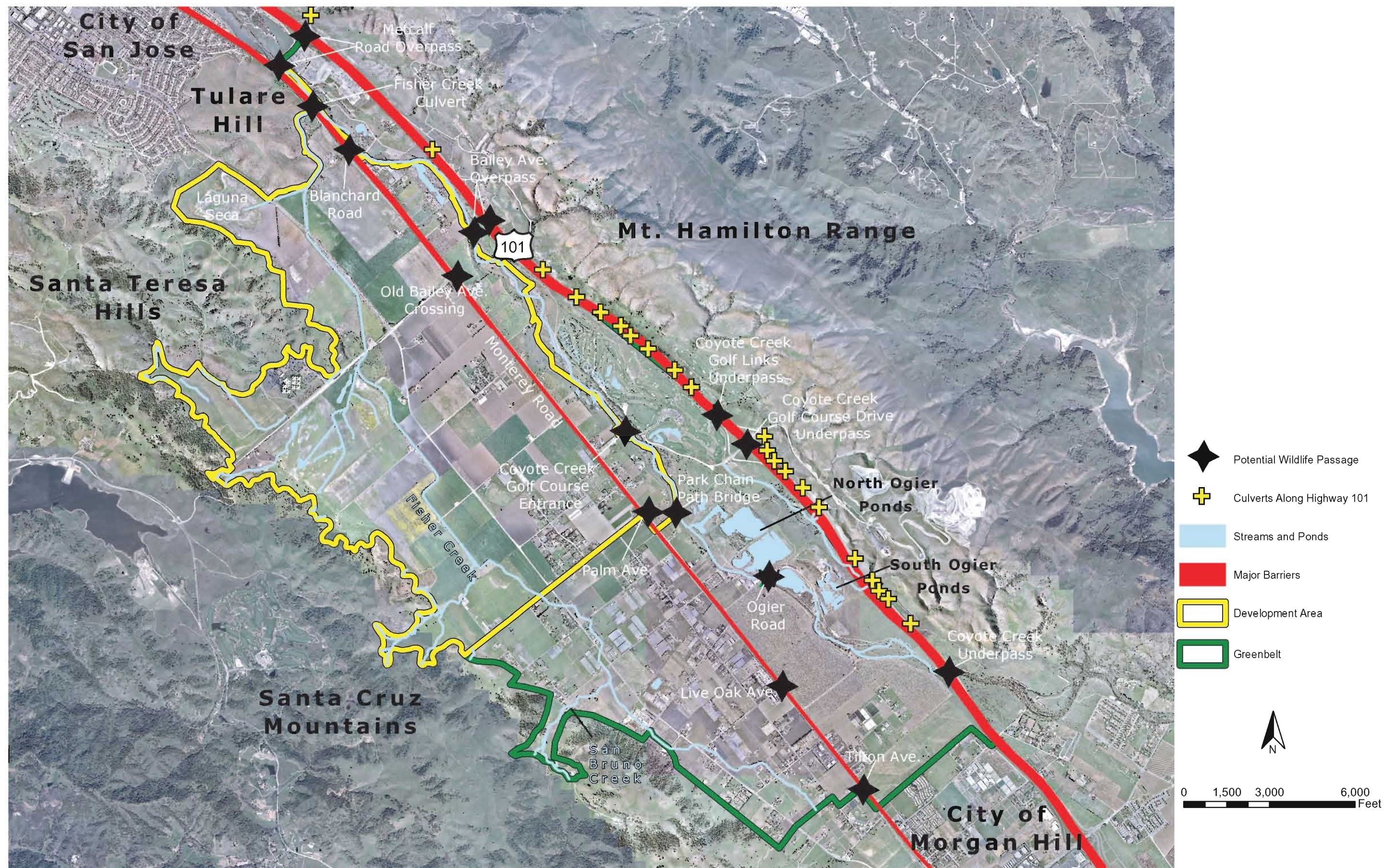
Structural components of wildlife movement corridors can differ depending on the habitat requirements, life histories, size, and movement mechanism of different species. For this reason, corridors are often characterized based on their suitability for “umbrella species”: species whose habitat requirements, size, and movement mechanisms encompass those of many other species. Wildlife movement corridors in the CVSP Area are discussed in the sections below based on the requirements of different groups of wildlife species.

Terrestrial Wildlife Movement Corridors

Terrestrial species typically use areas of open space or sparse development containing few barriers for movement between core habitat areas. Suitable cover from predators is also an important aspect of wildlife corridors for many terrestrial species. If barriers to movement are present, passages through the barriers must be present in order for terrestrial species to use the corridor. Large mammals, such as mountain lion (*Puma concolor*), require passages that are large enough to accommodate larger body sizes. Smaller wildlife species, such as American badger, can use culverts and other smaller passages. Other aspects of land use, including agricultural activity and proximity to developed areas, can also reduce the amount of movement that occurs through a corridor. Under current conditions, there are a number of barriers that may restrict the movement of terrestrial wildlife species within and through the CVSP Area (Figure 4.6-4). These barriers include agricultural activities, major highways and roads, rail lines, existing development such as industrial, commercial, and residential areas, and natural barriers such as Coyote Creek. Existing roads present barriers to terrestrial wildlife, and the removal of natural vegetation by agricultural activities has reduced suitable cover or disrupted the land surface.

Terrestrial wildlife movement in the north-south direction, particularly along Coyote Creek and Fisher Creek, is less restricted due to the presence of aquatic and riparian areas along these creeks. The presence of major areas of developed land to the north (San José) and to the south (Morgan Hill), however, limits the regional significance of north-south movement through the CVSP Area. These developed areas prevent or greatly inhibit the movement of terrestrial wildlife species between core habitat areas to the north and to the south. Although some north-south movement within the CVSP Area may enable access to other undeveloped areas on the east and west sides of the valley, these developed areas prevent the CVSP Area from functioning as a significant north-south wildlife corridor on a regional scale.

Unlike the urbanized areas to the north and south, extensive areas containing a mosaic of relatively undeveloped habitat that can serve as core areas for wildlife species are present to the east and west of the CVSP Area. To the east is the Mt. Hamilton Range, part of the larger Diablo Range, and to the west are the Santa Cruz Mountains, part of the larger Coast Range. The CVSP Area has been identified as a key regional linkage for wildlife movement between the Diablo Range and Santa Cruz Mountains (Thorne, 2002, 2006). Due to the proximity of these two mountain ranges in the vicinity of the CVSP Area, and development in the region outside of the CVSP Area, there are very few



MAJOR BARRIERS AND PASSAGES FOR WILDLIFE SPECIES IN THE PLAN AREA

FIGURE 4.6-18

other areas on a regional scale that offer a viable connection between the Diablo Range and the Santa Cruz Mountains.

There are several existing barriers that affect the east-west movement of terrestrial wildlife across the CVSP Area. Existing cross-valley corridor barriers include Highway 101, Monterey Road, and in some cases Coyote Creek. Highway 101, located immediately outside of the CVSP Area boundary, is the most significant of these barriers. In addition to the heavy traffic along Highway 101, the northbound and southbound lanes (each having up to four lanes of traffic) differ in elevation by approximately 12 feet, and are separated by a median that is approximately 20 feet wide, resulting in the existence of a steep slope between the two directions. In addition, a vehicle crash wall approximately five feet tall is present at the top of the slope in the median. To cross this barrier, terrestrial wildlife would need to negotiate heavy traffic on both sides of a five foot wall that drops off to a steeper than 2:1 slope.

Within the CVSP Area, Monterey Road presents another major barrier to terrestrial wildlife movement. Monterey Road is a four-lane roadway with a six-foot high concrete and fence barrier separating the northbound and southbound lanes of traffic. Some stretches of Coyote Creek containing deep water may also present a seasonal barrier to east-west movement of terrestrial wildlife. A retaining wall along Monterey Road at Tulare Hill also presents a barrier to wildlife movement between Tulare Hill and Coyote Creek. The PG&E substation near Metcalf Road in the northeastern Greenbelt also presents a partial barrier to both east-west and north-south wildlife movement.

Only limited options exist for east-west terrestrial wildlife movement across these barriers as shown on Figure 4.6-4. Numerous culverts are present along Highway 101 that could provide passage for smaller wildlife species, such as the American badger. Although many of these culverts are built along a steep grade, some, particularly adjacent to the northern portion of the CVSP Area, are not as steep and could provide passage for smaller species. For larger wildlife species, such as deer and mountain lion, there are only three significant passages across 101. The largest of these crossings is just outside the southern half of the Greenbelt, where Coyote Creek passes underneath Highway 101. This crossing offers the cover of the Coyote Creek riparian corridor and is not associated with developed areas. The other two crossings are at the Coyote Creek Golf Course in the Greenbelt: the Coyote Creek Golf Course exit, which passes beneath Highway 101, and one golf cart crossing underneath Highway 101.

Along Monterey Highway, breaks in the six-foot high barrier that could allow terrestrial wildlife passage occur at intersections with Bailey Avenue, Blanchard Road, Palm Avenue, Live Oak Avenue, and Tilton/Burnett Avenue (Figure 4.6-4). Many of these passages connect to developed areas that severely restrict further wildlife movement. The only unrestricted paths across Live Oak Avenue and Palm Avenue are to the south of these intersections, in the Greenbelt. Development and fences restrict movement to the north of these crossings. The Blanchard Road crossing is restricted by the MEC and residential development, but the Coyote Creek riparian corridor is also directly adjacent to Monterey Road in the area. Although limited by the presence of a steep drop and limited overhead, the culvert beneath Monterey Highway at Fisher Creek offers another potential undercrossing for large and small terrestrial wildlife species.

Existing structures at various points across Coyote Creek could facilitate terrestrial wildlife crossing, including Ogier Road, the entrance to the Coyote Creek Golf Course from Monterey Road, and the Coyote Creek Park Chain bike path crossing (Figure 4.6-4). Overpasses above Highway 101 at Bailey Avenue and Metcalf Road also offer potential passage, but are well lit overnight, contain no cover from predators, and have restricted entry and exit points. These features reduce the value of

the Metcalf Road and Bailey Avenue overpasses as wildlife movement corridors. The Metcalf Road overpass is also fenced on both sides along most of its length, is adjacent to the additional barrier presented by the PG&E substation, and ends at the retaining wall that separates Monterey Road from Tulare Hill.

No truly barrier-free wildlife corridors for terrestrial species currently exist in the CVSP Area. Despite the existence of significant barriers, there is evidence of some wildlife movement through corridors in the CVSP Area. The Tulare Hill area has also been identified as a viable corridor for the passage of American badgers from the Mt. Hamilton Range to the Santa Cruz Mountains (Tanya Diamond, pers. comm.). Badger burrows have also been observed on Tulare Hill (Jessie Quinn, pers. comm., Conservation Biology Institute, 2006). In addition, there is evidence that tule elk (*Cervus nannodes*) have begun to use the Tulare Hill area as a movement corridor from the Diablo range to the Santa Cruz Mountains (Henry Coletto pers. comm.). There are also numerous records of mountain lion kills at the Coyote Creek Golf Course underpass (Dave Johnston, pers. comm.). The following areas offer potential passages for the movement of terrestrial wildlife species through the CVSP Area:

- For north-south movement: Coyote Creek corridor and Fisher Creek corridor; agricultural fields and other undeveloped areas in the Greenbelt and Development Area; drainage ditches and culverts interspersed throughout the CVSP Area.
- For west-east/east-west movement: Coyote Creek crossing at Highway 101; Coyote Creek Golf Course underpasses at Highway 101; Crossings of Monterey Road at Live Oak Avenue in the Greenbelt, the Greenbelt side of Palm Avenue, Blanchard Road, and the Old Bailey Avenue; agricultural fields and other undeveloped areas up to Monterey Road and Highway 101; small culverts and drainage ditches throughout the CVSP Area for small mammals, reptiles, and amphibians.

The two areas that are most likely to support the movement of terrestrial wildlife species are the Greenbelt and Tulare Hill/Laguna Seca area. The Greenbelt contains a passage beneath Highway 101 via the Coyote Creek overpass and two undercrossings at the Coyote Creek Golf Course. Two passages across Monterey Road, Live Oak Avenue and Palm Avenue, are present relatively close to the Highway 101 crossings. Areas in the Greenbelt that are west of these crossing points are relatively free of major barriers, although some developed areas and roadways are present. In the northern portion of the CVSP Area, the Tulare Hill-Laguna Seca area offers a relatively short route from the Coyote Creek Corridor to the Santa Teresa Hills and Santa Cruz Mountains, and also contains natural habitat adjacent to Fisher Creek.

Terrestrial wildlife species can currently cross Monterey Road at Bailey Avenue, Blanchard Road, and through the Fisher Creek culvert. The Coyote Creek Golf Course crossing of Highway 101, however, is two to three miles from these points, and larger terrestrial wildlife species would need to travel this distance in order to reach a safe crossing of Highway 101, or cross Highway 101 via the road overpasses at Bailey Avenue and Metcalf Road.

Reptile and Amphibian Movement

Reptile and amphibian species, such as California Tiger Salamander (CTS) and California Red-legged frog (CRLF), are not known to require specific habitat components in movement corridors, but they do require the presence of suitable habitat within proximity in order to move successfully between core habitat areas (Trenham, 2001, Bulger, et al. 2003). The amount of time required for reptiles and amphibians to successfully travel between core habitat areas means that the corridors need to be relatively undisturbed and barrier free, or contain suitable habitat areas spaced at distances

that are reachable. Lack of cover in areas between core habitats for reptiles and amphibians can increase the potential for predation, and the presence of roads can increase the potential that an individual will not be successful in an attempt to move to a core habitat area.

Movement of reptile and amphibian species across most of the CVSP Area is restricted by the limited availability of suitable habitat, lack of cover, and presence of roads. Aquatic habitat known to support CTS is present on both sides of the CVSP Area, and CRLF is known to occur in the Ogier Ponds in the Greenbelt. These occupied habitat areas are approximately two miles apart, which is the furthest dispersal distance known to be traveled by CTS, and further than the dispersal distance traveled by CRLF (USFWS, 2005, 2006b). The land between these occupied habitats consists of plowed agricultural fields, developed land, highways, and other roadways. These land uses and barriers are not very compatible with the successful movement of most reptile and amphibian species.

Monterey Road and Highway 101 are major barriers to the passage of reptile and amphibian species. The railroad and portions of Coyote Creek also present barriers to reptile and amphibian species movement. Although some culverts exist beneath these barriers, the movement of reptiles and amphibians over dry land seems to be random (Trenham 2001, Bulger et al. 2003), and there is only a small chance that an individual would be able to find the existing culverts. These factors suggest that cross valley movement by amphibians and reptiles in the CVSP Area is not likely to occur regularly under current conditions.

A limited amount of dispersal likely occurs, however, between areas of suitable breeding habitat on each side of the valley. Existing aquatic corridors such as Fisher Creek and Coyote Creek may facilitate this movement. Other potential sources of movement are predatory birds, who may occasionally lose their prey while in flight.

Aquatic Species Movement

There is often no difference between core habitat areas and movement corridors for fully aquatic species. These species require water in order to live and move. Some fully aquatic species, such as the anadromous steelhead, however, use streams as corridors that link core habitat areas. These corridors need not have the structure of core habitat areas in the ocean or in spawning areas, but do need to be free of major barriers, or contain passages around barriers, in order to function as corridors. The barriers to fish passage in and through the CVSP Area are the Metcalf Percolation Ponds just north of the CVSP Area and the Ogier Ponds in the Greenbelt (Buchan and Randall, 2003). Although these barriers are not impassable, they do contain predatory fish species and raise the water temperature in downstream reaches of Coyote Creek. These ponds also contain culverts at inlets and/or outlets, which may also serve as barriers to fish passage during very high or very low flows. Despite these barriers, steelhead are known to be present in Coyote Creek. As discussed above, Fisher Creek does not contain very high quality habitat for steelhead or other native migratory fish species due to low flow conditions during the summer months and poor water quality as a result of agricultural activity. These poor habitat conditions and lack of connectivity to suitable spawning habitat make Fisher Creek in its current condition unsuitable for use by fish species as a movement corridor.

Movement of Flying Species

Pollinators, seed dispersers, and other flying species such as birds, bats, and insects, including the Bay checkerspot butterfly, use large patches of high value nesting or foraging habitat often associated with water for movement and dispersal corridors (Adams and Dove, 1989). These patches do not

need to be directly connected to be suitable for use in movement between core habitat areas. Existing long-term high value habitat for resident birds and insects or “stepping stone” dispersal areas within the CVSP Area include:

- Coyote Creek riparian zone and open water aquatic habitats;
- Fisher Creek riparian zone and open water aquatic habitats; and
- Serpentine grassland on Coyote Ridge, Tulare Hill, and foothills of the Santa Cruz Mountains.

These areas are likely to provide movement and dispersal corridors for flying wildlife species. Barriers that prevent movement of terrestrial species do not typically affect flying wildlife species. Flying wildlife species are, however, affected by large areas of developed land that occur in the absence of stepping stone dispersal areas, and can be affected by heavy traffic use. It has been shown, however, that Bay checkerspot butterflies successfully move across the heavy traffic on Interstate 280 at the Edgewood Preserve (Sisk 1992).

4.6.2.5 *Existing Biological Resources within the Bailey-over-the-Hill Alignment*

The Bailey-over-the-Hill (BOH) alignment area (as shown on Figure 2.0-14) is dominated by non-native annual grassland communities and developed areas interspersed with seasonal wetlands, streams, and riparian areas. Some of the streams and freshwater marsh area appear to be manmade or natural features that have been altered by agriculture and development. The important biological resources include serpentine grassland areas, a small stream, and Arroyo Calero Creek and its associated riparian areas along McKean Road.

Special Status Plant and Animal Species

The only special status plant species known to occur within the BOH alignment area is Santa Clara Valley dudleya. Santa Clara Valley dudleya is federally endangered and a CNPS List 1B species. It is a perennial herb that blooms from April to June and typically grows on rocky serpentine outcrops in valley and foothill grassland at elevations between 200 and 1,200 feet. The documented occurrence was confirmed in the field by WRA and is located within the alignment area near the northwestern boundary of the CVSP Area.

The only special status animal species known to occur within the BOH alignment area is the California tiger salamander (CTS). Suitable habitat for CTS includes ponds, slower moving streams, and freshwater marsh communities that are surrounded by relatively undisturbed land containing ground squirrel burrows for aestivation. California tiger salamanders are known to occur in one pond within the BOH alignment area and in another pond within 300 feet of the alignment area. The USFWS has proposed a critical habitat area for CTS and a small portion of the BOH alignment area, along existing McKean Road is located within this habitat area.

In addition to wildlife occurrences, portions of the BOH alignment area are located within USFWS designated critical habitat for the Bay checkerspot butterfly. As shown on Figure 5 of Appendix G, alternative alignments A and B pass through larger portions of the critical habitat than Alternative Alignments C, D, and E.

4.6.3 Biological Resources Impacts

4.6.3.1 *Thresholds of Significance*

For the purposes of this project, a biological resources impact is considered significant if the project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS; or
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS; or
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- reduce the number or restrict the range of any special status species; or
- conflict with any local ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

It should be noted that regulatory policies and special status plant species lists may change over the course of CVSP implementation. Impacts and mitigation measures discussed herein are based on current regulatory policy and could be modified in the future based on changes to species lists and/or regulatory policies regarding biological resources.

4.6.3.2 *Impacts to Biological Habitats*

Impacts to biological habitats are described below in terms of both direct and indirect impacts that may occur to sensitive biological habitats on- and off-site. Impacts to biological habitats as a result of the implementation of the CVSP may occur directly due to habitat loss or degradation of existing habitat both from development activities and the proposed relocation and restoration of Fisher Creek. An indirect impact is a physical change in the environment which is not immediately related to, but is caused by the project. Acreages of biological habitat anticipated to be impacted as a result of the proposed project are shown in Table 4.6-5, below. Development impacts are impacts due to the construction of roads, public parks and facilities, workplaces, and residential uses. Restoration impacts represent those areas that would be impacted by the construction of the restored Fisher Creek corridor.

TABLE 4.6-5 SUMMARY OF IMPACTS TO BIOLOGICAL HABITATS				
Habitat	Total Acreage*	Development Impacts**	Restoration Impacts**	Total Impacts**
Agricultural Fields	3,478	2,353	100	2,453
Ruderal Agricultural Fields	223	40	0	40
Developed Areas	2,182	699	4	703
Non-native Grassland	873	199	3	202
Coastal Sage-Chaparral Scrub	4	4	0	4
Wetlands	148	125	12	137
Streams	70 (126,005 lf)	5 (26,083 lf)	13 (24,096 lf)	18 (50,179 lf)
Ponds	116	8	<1	8
Central Coast Cottonwood-Sycamore Riparian Forest	190	3	0	3
Central Coast Riparian Scrub	34	4	21	25
Coast Live Oak Woodland	15	5	0	5
Valley Oak Woodland	54	32	3	35
Serpentine Grassland	34	21	2	23
Total	7,421	3,498	158	3,656
*From Table 4.6-4. **In acres. lf = linear feet				

Impacts to Agricultural Fields, Developed Areas, Non-native Grassland, and Coastal Sage-Chaparral Scrub

As shown in the table above, implementation of the CVSP would result in the urban development of approximately 2,353 acres of agricultural fields, 40 acres of ruderal agricultural fields, 699 acres of developed area, 199 acres of non-native grassland, and four acres of coastal sage-chaparral scrub. In addition, 100 acres of agricultural fields, four acres of developed area, and three acres of non-native grassland would be converted to a mix of wetland, riparian, and open water habitats for the relocation and restoration of Fisher Creek, which is beneficial to native plant and animal species because it creates additional habitat for these species.

Existing agricultural and ruderal agricultural fields are relatively disturbed and do not provide good long-term habitat for native plant or wildlife species and are not regulated as sensitive biological habitats by state, federal, or local regulations. Non-native grasslands and coastal sage-chaparral scrub, while providing some quality habitat for plant and wildlife species, are not protected by local, state, or federal regulations. The proximity of these habitats to existing disturbed and developed land decreases their value as habitat. The biological loss of developed habitat is not a significant environmental impact. Finally, these biological habitats are locally abundant in the Greenbelt, the Santa Cruz Mountains, and the Mt. Hamilton Range. For these reasons, impacts to these habitats would be less than significant.

Impact BIO-1: The proposed project would result in the loss of agricultural fields, developed areas, non-native grassland, and coastal sage-chaparral scrub biological habitats. While the loss of agricultural lands is a significant land use impact,

it is not considered a significant biological impact because these lands are not considered to be sensitive biological habitats. **[Less than Significant Impact]**

Impacts to Wetland and Open Water

Approximately 125 acres of wetland, five acres (26,083 linear feet) of stream, and eight acres of pond habitats would be converted to developed land as a result of implementation of the CVSP, including the construction of the bridges over Coyote Creek, as summarized in Table 4.6-6, below. In addition, approximately 13 acres (24,096 linear feet) of streams, less than one acre of ponds, and 12 acres of wetland communities would be impacted during restoration/relocation of Fisher Creek. While most of the wetlands impacted are located in farmed agricultural fields and therefore have decreased functions and values when compared to non-farmed wetlands, the placement of fill in 137 acres of wetlands, 18 acres (50,179 linear feet) of streams, and eight acres of ponds is a significant adverse environmental impact. It should be noted that the project would avoid and not impact approximately 11 acres of existing wetlands, 52 acres (75,826 linear feet) of existing streams, and 108 acres of existing ponds within the CVSP Area.

Impact BIO-2: The proposed project would result in the loss of approximately 163 acres (50,179 linear feet) of wetlands, streams, and ponds. **[Significant Impact]**

TABLE 4.6-6 SUMMARY OF IMPACTS TO WETLANDS AND OPEN WATER HABITATS*					
Habitat	Existing Acreages	Development Impacts	Fisher Creek Restoration Impacts	Total Impacts	Total Area Avoided
Wetlands	148 ac	125 ac	12 ac	137 ac	11 ac
Streams	70 ac (126,005 lf)	5 ac (26,083 lf)	13 ac (24,096 lf)	18 ac (50,179 lf)	52 ac (75,826 lf)
Ponds	116 ac	8 ac	<1 ac	8 ac	108 ac
Total	334 ac (126,005 lf)	138 ac (26,083 lf)	25 ac (24,096 lf)	163 ac (50,179 lf)	171 ac (75,826 lf)
Note: Impacts to wetlands include temporary impacts to approximately 80 acres associated with the excavation of Laguna Seca for use as a flood storage basin as previously approved in conjunction with the CVRP project. The USACE has determined that impacts within Laguna Seca are self-mitigating and therefore, no mitigation is required for impacts to the 80 acres of wetlands in Laguna Seca. Permits from the USACE have already been obtained for this work, which is currently underway.					

The implementation of the CVSP would also result in indirect impacts to wetlands, ponds, and streams due to the potential for introduction of non-native invasive species such as arrundo and eucalyptus, from landscaping and water discharge into Fisher Creek. Introduction of non-native species into these communities (including bullfrogs, etc.), would result in a decrease in functions and values and could lead to conversion to upland habitats if these invasive species are left uncontrolled. This would be a significant impact.

Impact BIO-3: The proposed project would result in impacts associated with the potential for introduction of non-native species into Fisher Creek. **[Significant Impact]**

The proposed project could also include the construction of groundwater recharge basins within the Greenbelt. Although the locations and hydrological characteristics of the basins have not yet been determined, their placement in proximity to existing wetlands, ponds, and/or streams could result in indirect impacts due to the potential spread of non-native species from the basins to these sensitive habitats. The need, location, and construction timing of these basins will be outlined as part of the overall infrastructure financing plan, with input from the SCVWD. While biological sensitivity and hydrological characteristics will be taken into account when determining the locations of the proposed basins, indirect impacts associated with the introduction of non-native species would be a significant impact to wetlands and open water habitats in the Greenbelt.

Impact BIO-4: The construction of groundwater recharge basins in the Greenbelt would result in impacts associated with the potential introduction of non-native species into wetland, stream, and/or pond habitats. **[Significant Impact]**

Impacts to Riparian Communities

As shown in Table 4.6-7, below, the proposed project would result in impacts to approximately 28 acres of riparian habitat (central coast cottonwood-sycamore riparian forest and central coast riparian scrub). The majority of the impacts would occur due to the proposed relocation/restoration of Fisher Creek, i.e., the filling of existing Fisher Creek.

Impacts associated with the two proposed four-lane bridges over Coyote Creek were determined based upon the general locations known at this time, and are included in the development impacts to riparian habitat in Table 4.6-7. Once the specific locations are determined, subsequent environmental review shall be completed to determine specific impacts at the proposed locations of the bridges and the use of clear span structures and other techniques to minimize impacts shall be determined at that time. With the exception of the two bridge crossings of Coyote Creek, all of the urban development proposed as part of the CVSP project on the east side of Monterey Road would be constructed outside of the 100-foot riparian corridor setback of Coyote Creek, as required by the City's Riparian Corridor Policy (refer to Section 3.0, *Consistency with Adopted Plans* of this EIR).

Impact BIO-5: The proposed project would result in impacts to approximately 28 acres of riparian habitat on Fisher and Coyote Creeks. **[Significant Impact]**

TABLE 4.6-7 SUMMARY OF IMPACTS TO RIPARIAN COMMUNITIES (IN ACRES)			
Community	Development Impacts	Fisher Creek Restoration Impacts	Total Impact
Central Coast Cottonwood – Sycamore Riparian Forest	3	0	3
Central Coast Riparian Scrub	4	21	25
Total	7	21	28

Impacts to Coast Live Oak Woodland, Valley Oak Woodland, and Serpentine Grassland

As shown in Table 4.6-8, below, the proposed project would result in impacts to approximately five acres of coast live oak woodland, 35 acres of valley oak woodland, and 23 acres of serpentine grassland habitat. This is a significant impact.

The proposed project also includes the construction of three water tanks and access roadways in the foothills of the Santa Cruz Mountains to the west of the CVSP Area. Although the locations of these tanks have not yet been determined, impacts to coast live oak woodland, valley oak woodland, and serpentine grassland habitat could occur. While biological sensitivity and visual resources will be taken into account in selecting the locations, the construction of the future tanks and access roadways could result in significant impacts to these sensitive biological habitats. The areas of impact will be determined when tank locations are proposed.

Impact BIO-6: The proposed project would result in the loss of approximately five acres of coast live oak woodland, 35 acres of valley oak woodland, and 23 acres of serpentine grassland habitat. Additional acreage may be impacted when water tank locations are determined. **[Significant Impact]**

The proposed project could also indirectly impact serpentine grassland habitats located north, east, and west of the CVSP Area through an increase in nitrogen deposition as a result of the project. This issue is discussed subsequently in Section 4.6.3.7 of this EIR.

TABLE 4.6-8 SUMMARY OF IMPACTS TO OTHER SENSITIVE BIOLOGICAL COMMUNITIES (IN ACRES)			
Community	Development Impacts	Fisher Creek Restoration Impacts	Total Impact
Coast Live Oak Woodland	5	0	5
Valley Oak Woodland	32	3	35
Serpentine Grassland	21	2	23
Total	58	5	63

4.6.3.3 *Impacts to Special Status Plant Species*

Mount Hamilton thistle typically occurs in and along perennial stream channels in serpentine grassland, and is the only special status plant species known to occur in the CVSP Area. The only known occurrence in the CVSP Area is in the Greenbelt. All other areas containing potential habitat for this species within the CVSP Development Area have been surveyed with negative results. No direct (from development) or indirect (from nitrogen deposition) impacts are expected to occur to Mt. Hamilton thistle as a result of implementation of the CVSP. The Greenbelt area will not be developed as part of the CVSP and because Mt. Hamilton thistle occurs primarily in streams in serpentine soils, it is not likely to be affected by increased nitrogen deposition because non-native annual grasses are not as prevalent in these areas.

Since 2001, WRA has been annually monitoring the Mt. Hamilton thistle population in a stream that includes runoff from “The Ranch on Silver Creek Golf Course”. Golf courses can be significant

sources of nitrogen due to runoff from fertilizers. Although populations of Mt. Hamilton thistle at The Ranch on Silver Creek Golf Course site have shifted since project grading and construction, the size of the population has been stable for the past three years and individuals are now present in some locations where the species was not previously present. For this reason, Mt. Hamilton thistle is known to be able to withstand increases in nitrogen.

Impact BIO-7: The proposed project would not result in direct or indirect impacts to Mt. Hamilton thistle. **[Less than Significant Impact]**

Four special status plant species (bent flowered fiddleneck, big scale balsamroot, bristly sedge, and wooly-headed lessingia) are known to occur elsewhere in Santa Clara County and have a moderate potential to occur in portions of the CVSP Area. Although these species were not found during protocol level surveys in the CVSP Development Area, not all properties were surveyed. Therefore, there is a potential that they could exist within the CVSP Development Area, although suitable habitat for bristly sedge only exists within the Greenbelt Area. Additional analysis may be needed over the course of the CVSP build-out due to changes in the list of special status plant species. If these species occur in the CVSP Development Area, now or in the future, implementation of the CVSP would result in direct impacts to these species.

Impact BIO-8: The proposed project could result in the loss of habitat and take of bent flowered fiddleneck, big scale balsamroot, bristly sedge, and wooly-headed lessingia, if they are present within the CVSP Development Area. **[Significant Impact]**

4.6.3.4 *Direct Impacts to Special Status Animal Species*

Impacts to special status animal species are described below. It should be noted that direct and indirect impacts to these species would only occur if the animals are present on or adjacent to properties that are the subject of this EIR. As previously discussed, not all properties were accessed; therefore, some properties will require additional analysis prior to development. If special status animal species are not present on the properties during protocol-level surveys (for species that could occur on the sites), then impacts would likely not occur. Additional analysis may be needed over the course of the CVSP build-out due to changes in the list of special status animal species. A summary of impacts to currently identified special status animal species is provided below.

Impacts to Central California Coastal Steelhead

Steelhead are known to occur within Coyote Creek and would be impacted by construction of the two proposed bridges over Coyote Creek. Construction of clear-span bridges is preferred, but it may be necessary to place bridge supports in Coyote Creek, which could result in direct mortality to adult and juvenile steelhead from acoustic disturbance or direct take of individuals. Temporary degradation of habitat and water quality in the creek could occur as a result of vegetation removal and construction-related noise and debris. Disturbance to migrating steelhead may occur if construction of the bridges is done during key migration periods. In addition, the presence of piles and the overpasses may result in long-term localized degradation to the quality of habitat for steelhead in areas near the bridge crossings. The construction of these bridges would have a significant impact on Central California coastal steelhead.

Impact BIO-9: The proposed construction of two bridges over Coyote Creek would result in significant short- and long-term impacts to Central California Coastal steelhead. **[Significant Impact]**

Impacts to California Red-legged Frog and Foothill Yellow-legged Frog

Habitat for California red-legged frog (CRLF) is located within the CVSP Development Area as shown on Figure 4.6-3, and within areas along Coyote Creek that may be affected by construction of the two bridges over the creek. Other suitable habitat for CRLF may be located on properties that were not surveyed. Foothill yellow-legged frog (FYLF) is a CDFG species of special concern that may rarely occur in Coyote Creek.

Fill placed in aquatic habitat that contains CRLF or FYLF would result in the loss of habitat and potential incidental take of individuals. Development within 200 feet of aquatic habitat occupied by these species would also result in loss of habitat and potential take of individuals. Development may also impede CRLF dispersal by placing fill in drainages, widening and constructing roadways, and developing areas between two or more suitable aquatic habitats. Other impacts to CRLF would include increased traffic, alteration of hydrology and water quality in habitats, introduction of predatory non-native species, increased night-time lighting, and increased harassment by people and pets.

Impact BIO-10: The proposed project could result in significant impacts to California red-legged frogs due to the loss of suitable aquatic habitat, creation of barriers to suitable habitat, and the direct loss of individuals. Impacts to foothill yellow-legged frogs, if present, could occur during construction of the bridges over Coyote Creek. **[Significant Impact]**

Impacts to California Tiger Salamander

California tiger salamander (CTS) are known to occur in the pond areas of the Greenbelt and immediately adjacent to the CVSP Development Area in the foothills of the Santa Cruz Mountains. Other suitable habitat may be located on properties that were not surveyed. Placing fill in aquatic habitats containing CTS would result in loss of breeding habitat and potential incidental take of individuals, if CTS is present. In addition, fill placed in adjacent upland aestivation and dispersal habitat, which includes undisturbed areas containing small mammal burrows or other underground habitat within 2,200 feet of occupied aquatic habitat, would significantly impact CTS.

The presence of existing barriers to dispersal, such as roads, or areas of intense disturbance, such as agricultural fields, reduces the area of suitable aestivation and dispersal habitat. Increased human activity such as increased traffic and the construction of new roadways (vehicular mortality), alterations of hydrology and water quality, potential introduction of predatory non-native species, increased night-time lighting, and increased harassment by people and pets would all contribute towards significant impacts to CTS. The potential for introduction of predatory non-native fish, amphibians, and crustaceans into waterways and CTS habitat would also result in significant impacts to CTS. Indirect impacts to CTS include reduced water quality resulting from unregulated discharge of contaminants or sediment from development and alteration of hydrology in aquatic habitats.

Impact BIO-11: The proposed project could result in significant impacts to California tiger salamanders due to the loss of suitable aquatic and upland aestivation habitat, creation of barriers surrounding suitable habitat, potential introduction of non-native predatory species, and the direct loss of individuals. **[Significant Impact]**

Impacts to Western Pond Turtle

Western pond turtle (WPT) is known to occur in ponds in the Greenbelt and west of the CVSP Development Area. Other suitable habitat may be located on properties that have not yet been surveyed. Fill placed in suitable habitat where WPT is present and the removal or upland breeding habitat would be direct impacts and may result in the take of individuals. Indirect impacts to WPT include reduced water quality resulting from unregulated discharge of contaminants or sediment from development, alteration of hydrology in aquatic habitats, increased disturbance and/or predation from pets and humans, increased night-time lighting, and the construction of roadways that may separate habitat areas and lead to vehicle mortality.

Impact BIO-12: The proposed project could result in significant impacts to western pond turtles due to direct take or indirect impacts. **[Significant Impact]**

Impacts to Bay Checkerspot Butterfly

Several small areas of BCB critical habitat would also be impacted by the CVSP. However, the impacted critical habitat areas are located on developed land and agricultural fields, which do not contain BCB host or nectar plant species. Therefore, the development of these areas will not affect the continued survival of BCB and are less than significant.

Impact BIO-13: The CVSP would impact USFWS designated critical habitat for the Bay checkerspot butterfly. However, no suitable habitat for the butterfly exists in the critical habitat areas within the CVSP Area. **[Less than Significant Impact]**

Impacts to Great Blue Heron, Long-billed Curlew, and Tricolored Blackbird

Great Blue Heron, Long-billed Curlew, and Tricolored Blackbird have been documented to occur in Coyote Creek, Ogier Ponds, and associated riparian areas within the Greenbelt. These species are not likely to be impacted by either the construction or long-term use of the only proposed development activities within the Greenbelt; construction of groundwater recharge ponds and the two bridges over Coyote Creek. The Long-billed Curlew only occurs in the area during the winter season, and is not likely to nest in the CVSP Area. These species are all known to occur in and near urban areas. Since no other urban development is proposed for the Greenbelt, implementation of the CVSP would not result in significant impacts to these species.

Impact BIO-14: The proposed project would not result in significant short- or long-term impacts to Great Blue Heron, Long-billed Curlew, or Tricolored Blackbird. **[Less than Significant Impact]**

Impacts to Western Burrowing Owl

Western Burrowing Owls were observed at two locations within the CVSP Development Area. Development and construction activities in occupied Burrowing Owl habitat during nesting and wintering season may result in loss of habitat and direct mortality. Other impacts to Burrowing Owls include increased predation from unleashed pets, widening and construction of roadways, increased night-time lighting, and nest abandonment due to noise or other human disturbance.

The proposed project would result in the loss of approximately 1,130 acres of potential Burrowing Owl nesting and foraging habitat. This amount of habitat is based on habitat types within the CVSP

(non-native grasslands, ruderal agricultural lands, and serpentine grasslands, which are likely potential Burrowing Owl habitat), because specific properties were not surveyed for Burrowing Owl habitat. The loss of nesting and foraging habitat for this species would be a significant impact.

Impact BIO-15: The proposed CVSP project could result in impacts to Western Burrowing Owls due to loss of individuals during construction, loss of habitat, increased predation, widening and construction of roadways and nest disturbance. The project would also result in the loss of up to 1,130 acres of potential Burrowing Owl habitat. **[Significant Impact]**

Impacts to Golden Eagle

Golden Eagles have been observed foraging in the CVSP Area, although suitable nesting habitat within and adjacent to the CVSP Area is limited as described in Appendix G. The proposed project would result in loss of foraging habitat for this species. Due to the lack of quality nesting habitat, however, the loss of foraging habitat would be less than significant. If Golden Eagles nest within one-quarter mile of the CVSP Area, disturbance to nesting eagles during the breeding season (typically February 1 to July 1) could occur as a result of construction activities and increased human activity and presence of development near the nest over the long-term. This could result in nest abandonment or poor reproductive success which would be a significant impact.

Impact BIO-16: The proposed project could result in disturbance to nesting Golden Eagles due to construction activities, development, and increased human activity. **[Significant Impact]**

Impacts to Nesting Special Status Avian Species

White-tailed Kite, Northern Harrier, Loggerhead Shrike, Yellow Warbler, Saltmarsh Common Yellowthroat, California Thrasher, Cooper's Hawk, and California Horned Lark are all avian species that are known to occur within the CVSP Area. Permanent impacts to nesting habitat for these or other special status nesting avian species could occur during construction as a result of tree and shrub removal, ground disturbance, increased night-time lighting, and by direct mortality. However, due to the abundance of available nesting habitat in the surrounding area, this would not be a significant impact. Construction activities during the nesting season (typically March 1 to August 1) could lead to nest abandonment or poor reproductive success. This would be a significant impact.

Impact BIO-17: Although the project would not result in a significant loss of nesting habitat, it could result in impacts to special status avian species during the breeding season due to construction-related disturbance and increased human activity. **[Significant Impact]**

Impacts to Coast Horned Lizard

Suitable habitat for coast horned lizard is present in the Santa Teresa Hills and may be present in undisturbed portions of the northern CVSP Area. Therefore, the proposed project could result in the loss of suitable habitat and/or direct take of this species. This would be a significant impact.

Impact BIO-18: The proposed project could result in significant impacts to coast horned lizard due to the loss of suitable habitat and/or the direct loss of individuals. **[Significant Impact]**

Impacts to San Francisco Dusky-Footed Woodrat

The San Francisco dusky-footed woodrat is documented to occur in riparian areas along Coyote and Fisher Creeks and is common and widely distributed throughout the region. Therefore, the loss of some individuals as a result of habitat removal would have a negligible impact on populations of this species throughout the region and is a less than significant impact. Impacts to Coyote Creek would not occur with the implementation of the CVSP.

Impact BIO-19: Impacts to San Francisco dusky-footed woodrat would be less than significant because this species is common throughout the CVSP Area and surrounding region. **[Less than Significant Impact]**

Pallid Bat and Yuma Myotis

Although these bat species are not known to be present within the CVSP Area, roosting and foraging habitats are present. Foraging habitat is present over most upland and aquatic habitats. These species are able to travel great distances to forage, however, so impacts associated with a loss of foraging habitat would be less than significant. Construction activities, noise, increased lighting, and human disturbance may result in the removal or disturbance of hibernation or maternal roost sites, if they are present. The disturbance of roost sites could result in direct mortality or a reduction in reproductive success. This would be a significant impact.

Impact BIO-20: Although the project would not result in a significant loss of foraging habitat, it could result in impacts to special status bat species related to the disturbance of roost sites. **[Significant Impact]**

Other Breeding Birds

There are several common migratory bird species known to occur within the CVSP Area, including but not limited to Red-tailed Hawk, Red-shouldered Hawk, and American Kestrel. These birds are protected by the Migratory Bird Treaty Act. While nesting habitat for these species is locally and regionally abundant, disruption of nesting avian species during the nesting season (typically March 1 to August 1) can lead to nest abandonment and poor reproductive success. This would be a significant impact.

Impact BIO-21: Although the project would not result in a significant loss of nesting habitat, it could result in impacts to common migratory bird species during the breeding season due to construction-related disturbance and increased human activity. **[Significant Impact]**

4.6.3.5 *Impacts to Trees*

The implementation of the CVSP would result in the loss of some or all of the trees documented in the tree survey prepared for the project, including at least 888 ordinance-size trees. This does not include the loss of trees associated with riparian habitat along Fisher Creek, which has habitat values apart from the value of the individual trees. The loss of riparian habitat has been calculated separately, as described above. Candidate City of San José Heritage Trees could also be lost.

Project developers would be required to apply to the City of San José for tree removal permits prior to development. Any proposal to remove trees for a development project would be evaluated, taking into consideration the number, age, size, condition, and species of the trees. It is generally

acknowledged that the implementation of the CVSP with high-density development would require the removal of most of the trees within the area. The loss of a large number of these trees would be a significant impact. Possibilities for tree preservation and suitability of transplanting appropriate trees will be considered as properties are developed and shall be based upon tree sizes, health, structure, locations, and species. Although many trees currently appear to be suitable for transplantation, due to the large numbers of native and non-native trees anticipated to be removed as part of the project, the loss of trees is a significant impact.

Impact BIO-22: The proposed project could result in the loss of at least 888 ordinance-size and candidate Heritage Trees. This is a significant impact. **[Significant Impact]**

It is assumed that the healthy 43 Heritage Keesling walnut trees along Monterey Road will be preserved as part of the project. In the event that any Heritage Tree is removed to accommodate urban development or construction-related impacts, it is considered to be a significant unavoidable impact because there are no feasible mitigation measures available to reduce the impact to a less than significant level. Simply planting replacement trees would not compensate for the loss of these large, Heritage Trees.

Impact BIO-23: While the project proposes to protect the Keesling walnut trees during construction and in perpetuity, the loss of any of these trees due to removal or construction would be a significant unavoidable impact. **[Significant Unavoidable Impact if Keesling Walnut Trees are Removed] [Less than Significant Impact if Keesling Walnut Trees are Retained.]**

Implementation of the CVSP would result in construction in the vicinity of existing trees to be preserved, including the Keesling walnut trees. Construction activities could damage these trees. In addition, the potential for preserved trees to continue to grow and thrive could be affected by the new more intense development that would result in the CVSP Development Area. This intense development could adversely affect the long-term survival of trees to remain by restricting sunlight and root growth, and/or altering groundwater conditions.

Impact BIO-24: The health of the trees to be preserved could be significantly impacted in the short-term by construction activities and in the long-term due to the proposed development. **[Significant Impact]**

4.6.3.6 *Impacts to Wildlife Movement*

Removal of riparian vegetation surrounding the existing Fisher Creek during the Fisher Creek relocation/restoration may temporarily impact movement and dispersal corridors for flying wildlife species. However, this would not be a significant impact due to the presence of riparian vegetation at Coyote Creek and the short length of portions of Fisher Creek proposed for restoration. The continued presence of riparian vegetation along Fisher Creek in its current configuration is not necessary to support movement of flying wildlife species, and the riparian vegetation removed during the restoration of Fisher Creek would be replaced.

Impact BIO-25: The removal of riparian vegetation surrounding Fisher Creek may temporarily impact the availability of movement and dispersal corridors for flying wildlife species. **[Less than Significant Impact]**

Impacts due to the construction of the bridges over Coyote Creek may cause temporary impacts to the Coyote Creek migratory corridor which may be significant if construction occurs during key periods of breeding and migration for aquatic species, as already described in Impact BIO-9, above. Implementation of the CVSP would result in some loss to dispersal corridors for aquatic species, including CRLF, CTS, and WPT, as described above in Section 4.6.3.4. In addition, indirect nitrogen deposition impacts to serpentine grassland adjacent to the CVSP Area may also affect “stepping stone” dispersal corridors for Bay checkerspot butterfly. These are potentially significant impacts that are integrated into Impacts BIO-9, BIO-10, BIO-11, BIO-12, and BIO-28.

Despite the existence of several major barriers to the movement of terrestrial wildlife species in the CVSP Area, there is evidence that some movement may occur across the Tulare Hill area. Additional terrestrial wildlife movement may also occur in non-native grassland and agricultural fields in the Greenbelt. No major urban development is proposed by the CVSP in these areas. Movement along the Coyote Creek corridor would not be affected because Coyote Creek would be avoided with the exception of the construction of the two bridges. The Tulare Hill corridor would also remain largely undeveloped, containing the Laguna Seca Flood Storage Basin, restored Fisher Creek corridor, and potentially, the construction of ballfields. The restored Fisher Creek corridor would provide additional functions for wildlife movement within the CVSP Area due to the planned increase in riparian corridor width. In addition, no construction would occur within 100 feet of the top of bank of either creek, except for the two bridges crossing Coyote Creek. The preservation of the Greenbelt as part of the CVSP would be beneficial to the preservation of wildlife movement corridors. Although a small amount of occasional inter-valley movement in the central portions of the CVSP Area may be affected, existing corridors in the Greenbelt and Tulare Hill areas would not be developed.

Implementation of the CVSP would, however, result in increased traffic along Monterey Road and Santa Teresa Boulevard, particularly at night, which could reduce the viability of the wildlife movement corridors available in the CVSP Area. In addition, the presence of domestic animals and increased night lighting in the CVSP Development Area may affect the use of these wildlife corridors. These would be significant impacts to potential existing wildlife migration corridors.

Impact BIO-26: The proposed project could result in significant impacts to existing land traversing wildlife migration corridors. **[Significant Impact]**

4.6.3.7 Indirect Impacts due to Nitrogen Deposition

Impacts to Serpentine Grassland Habitat

Serpentine grassland habitat is considered a sensitive biological community by CDFG. Indirect impacts may occur to serpentine grasslands in the foothills of the Santa Cruz Mountains, Santa Teresa Hills, Tulare Hill, and Coyote Ridge (in the Mt. Hamilton Range) due to increased nitrogen emissions from the implementation of the CVSP at project build-out. Serpentine grasslands are known to contain very low levels of several important nutrients for plant species, including nitrogen. These low nutrient levels, and the presence of several elements that are toxic to many plant species, contribute to the presence of many unique plants that grow mainly on serpentine soils, some of which occur only in Santa Clara County. Some of these plant species are known to support special status wildlife species, including the federal endangered Bay checkerspot butterfly. Serpentine grasslands are also identified as a sensitive community by CDFG (CDFG, 2006) and USFWS. Therefore, any impacts that may occur to this community as a result of Plan implementation would be significant.

Implementation of the Plan would result in increased air pollutant emissions from traffic and other industrial and non-industrial sources. Emissions from these sources are known to increase airborne nitrogen, and a certain amount of that airborne nitrogen is converted through a chemical process into forms that can fall to the earth as depositional nitrogen. It has also been shown that increased nitrogen in serpentine soils can favor the growth of non-native annual grasses over native serpentine species (Weiss, 1999). These non-native species, if left unmanaged, can overtake the native serpentine species, including dwarf plantain, the host plant for the Bay checkerspot butterfly.

The methods and assumptions used in this analysis are based on an endangered species consultation issued by USFWS (2001b) for the CVRP and Metcalf Energy Center (MEC) projects. The CVRP project, as previously described, includes campus industrial development in north Coyote Valley and the MEC project is a natural gas power plant recently constructed in the northeast corner of the CVSP Development Area. The CVRP project has not yet been constructed; however, the primary source of NO_x is anticipated to be in the form of emissions from increased traffic associated with the urban development. A major component of the emissions from the MEC is nitrogen in the form of nitrous oxides (NO_x) and ammonia.

Based largely on the research performed by Weiss (1999), the USFWS consultation concluded that increased nitrogen emissions from the CVRP and MEC would result in increased nitrogen deposition in serpentine grasslands on Tulare Hill and Coyote Ridge. The USFWS also concluded that this increase in nitrogen deposition would result in impacts to serpentine grasslands, and therefore Bay checkerspot butterfly habitat on Tulare Hill and Coyote Ridge. The impacts to serpentine habitat from MEC and CVRP were quantified based on modeling of the potential movements and deposition of MEC nitrogen emissions (CH2MHill, 2000). The USFWS determined the impacts and mitigation for CVRP by comparing CVRP nitrogen emissions to nitrogen emissions from MEC.

The modeling completed for MEC and the impacts and mitigation calculations completed by USFWS contain several assumptions regarding the nature and behavior of nitrogen emissions and nitrogen deposition. These assumptions result in very conservative over-estimates of the actual amount of nitrogen deposition that may actually take place as a result of CVRP and MEC emissions. Because this analysis of nitrogen deposition is based on the MEC analysis, it is important to note some of these worst-case assumptions:

- 1) The USFWS consultation and background documentation assume that 100% of the NO_x emitted from the CVSP would completely and immediately be converted to depositional nitrogen that would then be deposited on the adjacent hillsides. In reality, NO_x released into the atmosphere must undergo a complex set of chemical reactions before it is converted to depositional nitrogen (CH2MHill, 2000) and only a portion of the gaseous nitrogen emitted is converted. This assumption greatly increases modeled deposition rates, since prevailing wind patterns (northwesterly winds) are likely to transport NO_x emitted from the CVSP Area far to the east, likely to the Central Valley of California, rather than affect the Santa Clara Valley.³⁰ Most of the nitrogen deposition currently occurring in the serpentine hills around the CVSP Area is likely to be a result of the conversion of emissions that occur to the northwest, in the greater Bay Area.³¹
- 2) The methods used in this analysis and the USFWS consultation do not account for anticipated future reductions in regional NO_x emissions due to technological advancements. Improvements to engine emissions that occurred between 1993 and 1999 resulted in a 15-

³⁰ CH2MHill, 2000, Don Ballanti, pers. comm., Edith Allen, pers. comm..

³¹ CH2MHill 2000, Don Ballanti, pers. comm.

17% decrease in depositional nitrogen (Calpine/Bechtel 2000). The latest available forecasts of Santa Clara County NOx emissions expect county-wide emissions to decline from 188.3 tons/day in 2005 to 60.9 tons per day in 2020, a 68% reduction in 15 years (BAAQMD 2006). The analysis of nitrogen deposition as a result of the CVSP is based on current nitrogen emission levels and deposition rates, which is clearly a worst-case assumption.

- 3) This analysis assumes that emissions and depositional impacts from the CVSP Area (an indirect source) would be proportional to that determined for the MEC, which is a point source. This is clearly a worst-case assumption, as the emissions from the CVRP and CVSP projects will occur as area sources (primarily on-site combustion of natural gas for heating) and as mobile sources (vehicles both on and off-site). These types of sources occur over a large area and therefore result in reduced concentrations compared to a single point source such as the MEC. There are many difficulties associated with modeling nitrogen concentrations associated with an indirect source, and there is disagreement among experts as to the best method for modeling these distribution patterns. MEC is located in the northeast corner of the CVSP Area. Using the modeling done as part of the analysis of nitrogen deposition for MEC represents a worst-case, conservative means of estimating the amount and distribution of nitrogen deposited as a result of CVSP emissions.
- 4) Both the USFWS consultation and this analysis assume that the existing nitrogen deposition in the serpentine grasslands surrounding the CVSP Area is already above levels required to result in impacts to serpentine grassland communities. The amount of nitrogen deposition in serpentine grasslands that would affect change in habitat structure has yet to be established through scientific study. Therefore, no threshold of significance has been established for nitrogen emissions and deposition.

To calculate the serpentine grassland impacts for CVRP emissions, the NOx emissions from CVRP were compared to the NOx emissions from MEC.³² This comparison was used to calculate an estimated increase in nitrogen deposition that may occur as a result of the CVRP project. The estimated increase in nitrogen deposition from CVRP was compared to the area of serpentine affected by the increased deposition as determined by the modeling that was done for the MEC. Based on these calculations, a similar analysis was prepared to analyze potential impacts to serpentine grasslands due to increased nitrogen emissions from the CVSP Area. Appendix G contains a description of various possible methods identified to determine CVSP Area impacts to serpentine grassland areas as a result of nitrogen emissions.

The impact of nitrogen emissions associated with the Plan Area at build-out can be estimated by comparing projected nitrogen emissions from the Plan Area with the nitrogen emissions from CVRP. Total nitrogen emissions from CVRP were estimated to be 1,271 pounds per day (USFWS, 2001b). Based on the traffic and other emission sources generated by the CVSP project, nitrogen emissions at project build-out are estimated to be 848 pounds per day (Ballanti, 2006)³³, or 66.7% of the nitrogen

³² The modeling that was performed to determine MEC nitrogen deposition accounted for nitrogen sources from NOx and ammonia (CH2MHill 2000, Calpine/Bechtel 2000). Comparing CVRP emissions with MEC NOx emissions, but not including MEC ammonia emissions results in an overestimate of the impacts associated with CVRP. The nitrogen emitted from MEC as NOx accounts for only half of the total nitrogen emissions from MEC, and therefore only accounts for half of the total nitrogen deposition determined by the MEC modeling. If CVRP emissions were compared with total MEC nitrogen emissions, the area of impact calculated for CVRP would be 115 acres. This lower result more accurately reflects the nitrogen deposition from CVRP based on the modeling done for MEC. Despite this overestimate, the analysis of impacts for the CVSP project is determined based on the impacts and mitigation required for CVRP in the USFWS consultation, and does not adjust for this miscalculation.

³³ The method used to calculate the impacts and mitigation for CVRP uses a multiplier of 2 to account for

emissions from CVRP. The area of serpentine grassland impacted by CVRP was calculated to be 223 acres (USFWS 2001b, MEC 2000, Chris Nagano, pers. comm.).³⁴ Under the worst-case assumption that the deposition patterns modeled for MEC (a point source) and applied to CVRP are applicable to the CVSP (an area source), the estimated impact to serpentine grassland as a result of nitrogen emissions from the CVSP project is 149 acres (66.7% of 223 acres). This estimate may be adjusted based on the best available information if future advances in the science of modeling the deposition patterns of NOx become available.

According to the precedent set forth in the USFWS endangered species consultation (2001b), any additional input of depositional nitrogen on serpentine areas surrounding the Plan Area constitutes an impact to serpentine habitat and the special status species that inhabit serpentine grassland areas. Therefore, the potential impact to 149 acres of serpentine grassland habitat as a result of Plan implementation is a significant impact.

Impact BIO-27: Indirect impacts may occur to approximately 149 acres of serpentine grassland areas in the foothills of the Santa Cruz Mountains, Santa Teresa Hills, Tulare Hill, and Coyote Ridge as a result of non-native grasses overtaking native serpentine plant species due to the output of depositional nitrogen from the CVSP project. **[Significant Impact]**

Indirect Impacts to Special Status Species

Bay checkerspot butterfly is known to occur in the serpentine grassland in the Mt. Hamilton Range, Tulare Hill, and foothills of the Santa Cruz Mountains. Habitat for Bay checkerspot contains an abundance of dwarf plantain, Indian paintbrush, owl's clover, and other nectar plant species. Increased nitrogen emissions as a result of urban development in the CVSP Area may result in a shift in plant composition, which could affect the abundance of these species as described previously. This potential reduction of host and nectar plant species abundance directly affects the population size of Bay checkerspot. In addition, the loss of or indirect impacts to serpentine grasslands adjacent to the CVSP Area could impact "stepping stone" dispersal corridors of the Bay checkerspot butterfly. This would be a significant impact.

Impact BIO-28: The proposed project could result in significant impacts to Bay checkerspot butterfly as a result of nitrogen deposition and loss of stepping stone dispersal habitats. **[Significant Impact]**

Five special status herbaceous plant species are known to occur in serpentine grasslands adjacent to the CVSP Area: Santa Clara Valley dudleya, fragrant fritillary, smooth lessingia, Metcalf Canyon jewelflower, and most-beautiful jewelflower. In addition, one special status plant species (woolly-headed lessingia) has the potential to occur in serpentine grasslands adjacent to the CVSP Area, but is not known to occur there. Indirect impacts could occur to these species due to an increase in the number of non-native grassland species resulting from nitrogen deposition. These non-native grassland species could out-complete the special status native plant species in serpentine areas. Therefore, the proposed project could have significant direct and indirect impacts to these species.

"additional sources of nitrogen reasonably likely to occur from CVRP" that may not have been accounted for in the modeling of CVRP air quality. This multiplier is not based on scientific analysis or modeling of regional traffic, and is used by USFWS to account for regional nitrogen emissions that may occur as a result of CVRP. The air quality modeling that was performed for the CVSP accounted for regional vehicle trips that may occur as a result of CVSP implementation.

³⁴ Mitigation was required at a 3:1 ratio of preserved to impacted serpentine grassland area. Total mitigation required for CVRP was 669 acres. Therefore, the total impact was 223 acres.

All of the special status shrubs that occur in areas adjacent to the CVSP Area occur in chaparral scrub and riparian communities. Non-native grasses are not prevalent in these communities, so species within these communities are not likely to be affected by the increased growth of non-native grasses due to nitrogen deposition.

Impact BIO-29: The proposed project could result in significant impacts to Santa Clara Valley dudleya, fragrant fritillary, smooth lessingia, Metcalf Canyon jewelflower, most-beautiful jewelflower, and woolly-headed lessingia as a result of nitrogen deposition. **[Significant Impact]**

Four special status invertebrate species inhabit serpentine grassland communities; Hom's micro harvestman, Jung's microblind harvestman, Edgewood blind harvestman, and Opler's longhorn moth (OPLM). Increased nitrogen deposition may impact the host plants for these species. In particular, a reduction in the number of cream cups, which is a host and nectar plant for OPLM, would directly affect the population size of OPLM. This would be a significant impact.

Impact BIO-30: The proposed project could result in significant impacts to special status invertebrate species, including Opler's longhorn moth, as a result of nitrogen deposition. **[Significant Impact]**

4.6.3.8 *Impacts within the Bailey-over-the-Hill Alignment Area*

A specific alignment for the roadway has not yet been determined nor has the roadway been designed, therefore, a site specific biological assessment has not been completed. It is anticipated that construction within the BOH alignment area would result in impacts to sensitive biological habitats, including central coast cottonwood-sycamore riparian forest, coastal and valley freshwater marsh, seasonal wetland, streams, serpentine grassland, coast live oak woodland, and valley oak woodland, similar to that of the development of the CVSP, and as described in Appendix G. Depending upon the alternative alignment chosen and the types and amounts of habitat ultimately lost, this could be a significant impact. In addition, the construction of the BOH roadway would result in the loss of ordinance-size trees.

Impact BIO-31: The future construction of the BOH roadway could result in the significant loss of sensitive biological habitats and presumably ordinance-size trees in the alignment area. **[Significant Impact]**

Only one special status plant species is known to occur within the BOH alignment area; Santa Clara Valley dudleya. Other special status plant species could also occur in the area, including bent flowered fiddleneck, big scale balsamroot, bristly sedge, Mt. Hamilton thistle, fragrant fritillary, Loma Prieta hoita, smooth lessingia, Hall's bush mallow, Metcalf Canyon jewelflower, and most-beautiful jewelflower. If present, these species could be impacted by roadway construction.

Impact BIO-32: The proposed project could result in significant impacts to special status plant species, including Santa Clara dudleya, if present in the Bailey-over-the-Hill alignment area. **[Significant Impact]**

Only one special status animal species is known to occur within the BOH alignment area; the California tiger salamander. In addition, the alignment area is located within designated critical habitat for both the California tiger salamander and the Bay checkerspot butterfly. Impacts to these and other special status animal species would be significant if they are present, as described in Appendix G.

Impact BIO-33: The proposed project could result in significant impacts to special status animal species, including California tiger salamander and Bay checkerspot butterfly, if present in the Bailey-over-the-Hill alignment area. **[Significant Impact]**

4.6.4 Mitigation and Avoidance Measures for Impacts to Biological Resources

As previously described, the policies in the City of San José's 2020 General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. Future CVSP development projects shall be subject to these General Plan policies, as well as the following standard measures to mitigate environmental impacts. Additional or modified mitigation measures may be identified based on subsequent environmental review, once specific development is proposed.

4.6.4.1 *Mitigation for Impacts to Biological Habitats*

Implementation of the mitigation measures described below may be combined and incorporated into an overall Resource Management Plan (RMP) for the CVSP project. The RMP will be prepared prior to CVSP implementation and contain a comprehensive description of the methods used to implement and monitor the mitigation measures described below. The following mitigation ratios for impacts to sensitive habitats are based on those required or commonly required under applicable policies, laws, and regulations as shown in Table 4.6-9, below. For very detailed descriptions of the mitigation measures, please refer to Appendix G.

TABLE 4.6-9 SUMMARY OF MITIGATION REQUIRED FOR IMPACTS TO SENSITIVE BIOLOGICAL HABITATS				
Community Types	Impact Type	Total Impacts	Mitigation Ratio¹	Area of Mitigation Required¹
Wetlands	Development	45 ac	1:1	45 ac
	Restoration	12 ac	1:1	12 ac
	Permitted Flood Basin Storage ²	79 ac	NA ²	NA ²
Streams	Development	5 ac (26,082 lf)	1:1	5 ac (26,082 lf)
	Restoration	13 ac (24,096 lf)	1:1	13 ac (24,096 lf)
Ponds	Development	8 ac	1:1	8 ac
	Restoration	<1 ac	1:1	0 ac ³
Central Coast Cottonwood-Sycamore Riparian Forest	Development	3 ac	3:1	9 ac
	Restoration	0 ac	1:1	0 ac
Central Coast Riparian Scrub	Development	4 ac	3:1	12 ac
	Restoration	21 ac	1:1	21 ac
Coast Live Oak Woodland	Development	5 ac	2:1	10 ac
	Restoration	0 ac	1:1	0 ac
Valley Oak Woodland	Development	32 ac	2:1	64 ac
	Restoration	3 ac	1:1	3 ac

**TABLE 4.6-9
SUMMARY OF MITIGATION REQUIRED FOR IMPACTS
TO SENSITIVE BIOLOGICAL HABITATS**

Community Types	Impact Type	Total Impacts	Mitigation Ratio ¹	Area of Mitigation Required ¹
Serpentine Grassland	Development	21 ac	2:1	42 ac ⁴
	Restoration	2 ac	2:1	4 ac ⁴
	Nitrogen Deposition	149 acres ⁵	3:1	447 ac ⁴

Notes:

¹Replacement:Impact. Assumes on-site mitigation within the CVSP Area.

²Laguna Seca Flood Storage Basin is considered by the USACE to be a self-mitigating impact that requires no mitigation.

³Mitigation for restoration impacts to ponds is incorporated in mitigation for development impacts.

⁴Area to be preserved off-site; assumes serpentine grassland adjacent to the CVSP Area will be preserved.

⁵Estimated based on relative emissions of nitrogen from CVRP compared to the CVSP.

Mitigation Measures for Impacts to Wetland and Open Water Communities

MM BIO-2.1: On-site creation of wetlands at a 1:1 (replacement:impact) ratio shall be required as part of the CVSP RMP, Wetland Mitigation and Monitoring Plan (WMMP) or similar document. A 1:1 replacement ratio is appropriate due to the degraded and farmed nature of the majority of the existing wetlands. The plan shall specify at least the following:

- Wetlands shall be created concurrent with or prior to filling of existing wetlands.
- The use of locally native, wetland plant species, quantities for planting, irrigation and maintenance requirements, performance criteria, and annual monitoring method for a five-year period shall be described.
- The majority of created wetland acreage shall be located within the relocated/restored Fisher Creek. If Fisher Creek cannot provide enough mitigation acreage, the Greenbelt shall be used to the extent feasible and based upon subsequent environmental review. If the Greenbelt is not used and mitigation sites outside of the CVSP Area are used, mitigation ratios shall be increased to a minimum of 2:1.
- A Section 404 Individual or Nationwide Permit must be obtained from the USACE and a Water Quality Certification must be obtained from the RWQCB, prior to the placement of fill in wetlands.
- A USACE jurisdictional delineation must be obtained for all wetland areas proposed for development prior to construction.

MM BIO-2.2: On-site creation of streams at a 1:1 ratio shall be specified as part of the CVSP RMP, Stream Mitigation and Monitoring Plan (SMMP), or similar document. The plan shall specify at least the following:

- As much of the stream mitigation as possible shall be created within the relocated/restored Fisher Creek corridor or in tributaries to the creek corridor.
- Created streams shall be designed to incorporate natural stream characteristics such as meanders and pool and riffle complexes.
- If stream acreage and length cannot be replaced within the relocated/restored Fisher Creek corridor, planting of appropriate riparian vegetation along Coyote Creek or Fisher Creek in the Greenbelt (which are in the same watershed) at a 2:1 ratio shall be implemented. Appropriate native riparian plantings increase the functions and values of riparian habitat by providing habitat for riparian plant and animal species, stabilizing creek banks, limiting the ability of non-native species to invade riparian areas, and shading waters. If mitigation for stream acreage and length and/or area cannot be replaced within the CVSP Area, an off-site mitigation shall be accomplished by preservation of existing stream area and length at a 10:1 ratio, restoration and preservation of off-site stream area and length at a 3:1 ratio, or some combination of the two.
- Restoration of off-site streams may be accomplished through in-bed stream improvements or planting of appropriate riparian vegetation along a given length of stream, or other appropriate restoration activities.
- A USACE Section 404 Individual or Nationwide Permit, a RWQCB Section 401 Water Quality Certification, a CDFG Section 1602 Lake and Streambed Alteration Agreement, and a SCVWD permit must be obtained prior to impacting existing streams. If a jurisdiction determination from the USACE has not been issued for an area proposed for development, one must be obtained prior to obtaining the above permits by submitting a delineation of wetlands and waters to the USACE.
- Streams and irrigation ditches impacted by the relocation/restoration of Fisher Creek are considered self-mitigating because they will be replaced by the new creek with improved functions and values. Irrigation ditches provide little habitat and contribute to poor water quality within the Fisher Creek corridor. Therefore, mitigation at a 1:1 ratio is adequate for impacts to streams and irrigation ditches within farmed portions of the CVSP Area.

MM BIO-2.3:

Mitigation for impacts to ponds shall be implemented as part of the CVSP RMP Wetland and/or Stream Mitigation Plans. Creation of ponds at a 1:1 ratio may be accomplished within the relocated/restored Fisher Creek corridor or within the Greenbelt. If mitigation for the loss of ponds cannot be accomplished within the CVSP Area, off-site creation of ponds at a 2:1 ratio will be required to reduce impacts to a less than significant level. If pond creation is not feasible off-site or on-site, planting of riparian vegetation at a 3:1 ratio, planted acreage to impacted acreage, or other appropriate aquatic restoration activities shall be implemented. The planting of appropriate riparian vegetation increases the functions and values of wetland areas. In addition, an Individual or Nationwide Permit, Water Quality Certification,

Lake and Streambed Alteration Agreement, and Jurisdictional Determination must be obtained prior to impacting existing ponds.

MM BIO-2.4: To prevent impacts to wetlands and streams due to construction of the Highway 101 bridge connections over Coyote Creek, a delineation of wetlands and waters shall be completed in areas proposed for construction. Where possible, impacts to wetlands and streams shall be avoided by placing bridge piles outside of jurisdictional waters and avoiding wetland areas during road construction. If the impacts to wetlands and streams cannot be avoided during construction, all impacts shall be subject to the provisions of Mitigation Measures 4.6-1 through 4.6-3. In addition, best management practices such as silt fencing and timing of construction shall be implemented as part of the Stream Mitigation and Monitoring Plan (MM BIO 2.2) to reduce potential temporary construction-related impacts to Coyote Creek to a less than significant level.

MM BIO-3.1: All aquatic features shall be subject to the provisions of an Invasive Species Control Plan to prevent introduction of non-native invasive plant and animal species to preserved, created, or restored wetlands, streams, and ponds in the CVSP Area. The Invasive Species Control Plan may be integrated into the CVSP RMP, and shall require at least the following:

- The proposed project be designed and operated to minimize the ability for invasive species to colonize aquatic features.
- The aquatic features shall be monitored on at least an annual basis for the presence of non-native invasive species. If non-native species are found, they must be removed or controlled using the best available techniques.
- An ordinance or policy shall be adopted prohibiting the use of known non-native invasive plant species in landscaping within the CVSP Development Area. Literature shall be distributed to homeowners within the Development Area, informing them of known non-native invasive species commonly used in landscaping and encouraging the use of native species.

MM BIO-4.1: To prevent impacts resulting from the creation of groundwater recharge basins in the Greenbelt, basins shall be placed in areas where no existing wetlands, streams, or ponds will be impacted. If impacts to these wetland and open water habitats cannot be avoided, MM BIO-2.1, 2.2, and 2.3 shall be implemented. In addition, to minimize water quality and non-native species impacts, basins shall not be placed in areas where they could outlet to Fisher Creek or Coyote Creek and MM BIO-3.1 shall be implemented.

Mitigation Measures for Impacts to Riparian Communities

MM BIO-5.1: Mitigation for impacts to riparian habitat at a minimum of a 1:1 ratio for restoration impacts and 3:1 for development impacts shall be required as part of the CVSP RMP, Riparian Mitigation and Monitoring Plan (RMMP), or similar document. The plan shall specify at least the following:

- The use of locally native, riparian plant species, quantities for planting, irrigation and maintenance requirements, performance criteria, contingency measures, adaptive management, and annual monitoring methods for a ten-year monitoring period shall be described. Use of locally native plant species is important to maintain or improve the existing habitat structure and genetic integrity of restoration and mitigation areas.
- Riparian areas impacted due to the restoration of Fisher Creek shall be re-created within the restored Fisher Creek corridor, to the fullest extent possible.
- If all necessary riparian mitigation cannot be accomplished within the restored Fisher Creek corridor, mitigation will be provided at a 3:1 ratio in suitable areas along Coyote Creek and Fisher Creek in the Greenbelt.
- If all necessary riparian mitigation cannot be accomplished within the CVSP Area, impacted riparian habitat will be replaced at a 4:1 ratio in an off-site preserve to be located when specific CVSP development is proposed.
- Riparian habitat impacted by the restoration of Fisher Creek not able to be re-created within the restored Fisher Creek corridor shall be subject to a 3:1 mitigation ratio (the same as riparian habitat development impacts).

MM BIO-5.2: To prevent impacts to riparian habitats due to construction of the Highway 101 bridge connections over Coyote Creek, bridge piles shall be placed outside of riparian habitat during bridge construction, if possible. If the impacts to riparian habitat cannot be avoided during construction, all impacts shall be subject to the provisions of MM BIO-5.1. In addition, best management practices such as silt fencing and timing of construction shall be implemented as part of the CVSP RMP, Stream Mitigation and Monitoring Plan (MM BIO-2.2), or similar document to reduce potential temporary construction-related impacts to Coyote Creek to a less than significant level.

Mitigation Measures for Impacts to Oak Woodland and Serpentine Grasslands

MM BIO-6.1: An Oak Woodland Preservation and Mitigation Plan shall be prepared or integrated into the CVSP RMP, and contain at least the following:

- Provisions to protect preserved oak trees during construction, including adaptive management and contingency measures.
- Mitigation for impacts to oak woodland as a result of the Fisher Creek restoration may be accomplished through creation of oak woodland habitat within the restored Fisher Creek corridor at a minimum ratio of 1:1 (created to impacted area).
- Mitigation for impacts to oak woodland as a result of development elsewhere in the CVSP Area may be accomplished through creation of oak woodland habitat within the restored Fisher Creek corridor or Greenbelt at a minimum ratio of 2:1 (created to impacted area).
- Specifications regarding the use of locally native oak species, quantities for planting, irrigation and maintenance requirements,

performance criteria, and annual monitoring methods for a five-year monitoring period.

- Requirements that no more than 40 percent of the created oak woodland area will be planted using seedlings. The remaining replacement oaks would be planted from deepots, or larger size individuals.
- To the extent feasible, the species diversity of impacted oak woodlands shall be maintained in the created mitigation areas.
- If all necessary mitigation land for oak woodlands is not available within the CVSP Area, oak woodland creation at a 2:1 ratio for acreage and oak woodland preservation at a 3:1 ratio will be necessary in an off-site preserve to be located when specific CVSP development is proposed.

MM BIO-6.2:

To mitigate for direct impacts (development of habitat) to serpentine grassland, preservation and management of serpentine grassland shall be accomplished through establishment of a serpentine grassland preserve, and preparation of a Preserve Management Plan or similar document. This plan may be integrated into the CVSP RMP, and shall include at least the following:

- Establishment of appropriate management goals such as expansion or improvement of habitat through implementation of methods such as grazing.
- Require annual monitoring of the Preserve for a ten-year period. The results of annual monitoring shall be presented in an annual report that discusses special status species populations, vegetation composition including non-native invasive species, comparisons of cover by native serpentine species and non-native grasses and forbs, and shall recommend management actions that could improve or expand habitat for special status species.
- The mitigation ratio for preservation of serpentine grassland areas adjacent to the CVSP Area shall be 2:1, preserved to impacted area.
- If preservation of adjacent serpentine grassland areas is not feasible, a minimum ratio of 3:1, preserved to impacted area, shall be accomplished through establishment of an off-site preserve to be located when specific CVSP development is proposed. Locating this preserve within Santa Clara County shall be a first priority.

MM BIO-6.3:

To prevent impacts to coast live oak woodland, valley oak woodland, and serpentine grassland as a result of the placement of water tanks in the hills adjacent to the CVSP Area, water tanks shall be placed in areas that will cause the least impacts to sensitive biological communities. If impacts to these sensitive biological communities are unavoidable in the placement of water tanks, mitigation as described in MM BIO-6.1 shall be implemented.

4.6.4.2 *Mitigation for Impacts to Special Status Plant Species*

Mitigation measures for impacts to special status plant species are based on required or commonly required measures under applicable policies, laws, and regulations, and may be integrated into the CVSP RMP. For detailed descriptions of the mitigation measures, please refer to Appendix G.

MM BIO-8.1: Implementation of MM BIO-8.2 and MM BIO-27.1 (indirect impacts) provide sufficient mitigation for lost habitat for special status plant species known to occur adjacent to the CVSP Area. Known populations of special status plant species will be monitored as part of the Preserve Management Plan or CVSP RMP. Recommendations for management actions that could improve habitat or increase the populations of special status species within any off-site preserve will be included in the Management Plan.

MM BIO-8.2: In order to prevent take of bent flowered fiddleneck and big scale balsamroot, surveys shall be done in portions of the CVSP Area which have not been previously surveyed and contain appropriate habitat for these species. If these species are found in the CVSP Area, the population and supporting habitat will be preserved if feasible. If preservation is not feasible, populations will be transplanted to suitable habitat in the Greenbelt or other land preserved for this project and monitored for five years. Transplantation of populations may be accomplished by relocating individual plants or through seed collection and dispersal, or a combination of both, to be determined based on species habitat requirements, lifecycle, and best available science.

4.6.4.3 *Mitigation for Impacts to Special Status Animal Species*

Mitigation measures for impacts to special status animal species are based on required or commonly required measures under applicable policies, laws, and regulations, and shall be integrated into the CVSP RMP, whenever applicable. For very detailed descriptions of the mitigation measures, please refer to Appendix G.

Mitigation Measures for Impacts to Central California Coastal Steelhead

MM BIO-9.1: Installation of bridge supports in Coyote Creek for construction of two Highway 101 connections may cause temporary or permanent degradation of habitat for Central California Coastal steelhead. Placement of bridge supports in Coyote Creek should be avoided if possible. If it is necessary to place bridge supports in Coyote Creek, they shall be positioned in areas that are determined by hydrologic and biologic analyses to be least likely to cause long-term habitat degradation. In addition, the following measures shall be applied:

- To reduce impacts to adult steelhead, all in-stream work shall be performed between July and October, when migrating and spawning adults are not present.
- To reduce construction-related impacts to adults and juveniles from shock wave and acoustic disturbance, coffer dams shall be installed upstream and downstream of the proposed bridge location.

- Dewatering shall be performed prior to the onset of construction. No work shall take place in a moving stream.
- A qualified biologist shall monitor the coffer dam installation to ensure that no special status aquatic species are present in the installation area.
- If any special status species are present in the installation area, coffer dam installation shall cease until individuals can be relocated to suitable undisturbed habitat.

Mitigation Measures for Impacts to California Red-legged Foothill and Yellow-legged Frogs

- MM BIO-10.1:** To determine areas of aquatic habitat occupied by CRLF and FYLF, protocol level surveys need to be performed in all portions of the Development Area where suitable aquatic habitat exists. Although surveys performed in 2003 are useful as background information, these survey results have expired and new survey protocols have been developed by USFWS for this species. Wherever possible, CRLF and FYLF habitat will be avoided and those areas containing CRLF and FYLF will be preserved. If fill of aquatic habitat occupied by CRLF and FYLF or surrounding upland habitat or other construction activity in occupied habitat is required, it shall be performed between July and November, during the non-breeding season. In addition, a USFWS-approved biologist shall relocate CRLF and FYLF, if present, to suitable preserved habitat with the permission of USFWS personnel.
- MM BIO-10.2:** To offset impacts to aquatic, upland, or dispersal habitat containing CRLF and FYLF, the applicant shall provide off-site habitat conservation, either through a conservation bank and/or easement at a 3:1 ratio of like-habitat for every acre of occupied aquatic or upland habitat (within 200 feet of occupied aquatic habitat) filled or removed.
- MM BIO-10.3:** In order to avoid impacts to special status aquatic species, placement of bridge supports in Coyote Creek should be avoided if possible. If it is necessary to place bridge supports in Coyote Creek, coffer dams shall be installed as described in MM BIO-10.1. Installation of the coffer dams shall occur between July and October, outside of the breeding period for the potentially impacted species. A qualified biologist shall monitor the coffer dam installation to ensure that no special status aquatic species are present in the installation area. If any special status aquatic species are present in the installation area, coffer dam installation shall cease until individuals can be relocated to suitable undisturbed habitat.
- MM BIO-10.4:** Implementation of Best Management Practices (BMPs) during construction activities for water quality, as described in Section 4.8, *Hydrology and Water Quality*. Implementation of an USFWS approved Stormwater Pollution Prevention Plan (SWPPP) containing BMPs designed to prevent construction-related discharge into all surface waters including those containing CRLF, FYLF, and other aquatic species.
- MM BIO-10.5:** The proposed project will be required to conform to City of San José Council Policy 6-29 to satisfy the requirements of the National Pollution Discharge Elimination System (NPDES) permit under Section 401 of the Clean Water

Act. The proposed project would implement Policy 6-29 to control stormwater quality and discharge quantities so that they are not significantly affected by urban development in the CVSP Area. This will prevent significant adverse effects to hydrology and water quality of avoided and off-site aquatic habitat post construction.

MM BIO-10.6: A Management Plan for bullfrog and other invasive predatory species shall be prepared or integrated into the CVSP RMP. The Management Plan shall include measures for eradication and monitoring to control invasive aquatic predators.

MM BIO-10.7: Installation of permanent exclusion fencing around new residential or industrial developments when adjacent or near aquatic habitat shall be required to reduce access by pets. Pamphlets will be dispersed to all new residents explaining the importance of maintaining control of pets and avoiding sensitive areas in their area. Signage adjacent to preserve or mitigation areas shall be installed to provide information to residents in the area and discourage disturbance.

MM BIO-10.8: Where roadway widening or construction is to occur within a dispersal corridor, culverts, causeways, bridges, and/or overpasses shall be incorporated into the design to allow wildlife, including special status aquatic species, to disperse under roads, thereby reducing road kills.

MM BIO-10.9: Where high intensity lighting is to occur within or adjacent to CRLF and FYLF breeding or dispersal habitat, downcast lighting or other appropriate lighting technology shall be incorporated into the design to reduce potential negative effects on wildlife species.

Mitigation Measures for Impacts to California Tiger Salamanders

Impacts to CTS shall be mitigated by implementation of MM BIO-10.4 through BIO-10.9 as well as by the mitigation measures described below.

MM BIO-11.1: To determine areas of aquatic and upland habitat occupied by California tiger salamanders (CTS), protocol level surveys will be completed in all portions of the CVSP Development Area where suitable habitat exists. Although past surveys performed from 2003 to 2005 are useful as background information, these survey results were limited to areas where access was permitted. Wherever possible, CTS habitat will be avoided and those areas containing CTS will be preserved. If fill of aquatic habitat, or ground disturbance to upland habitat occupied by CTS is required, it shall be limited to the non-breeding season (generally August through November). In addition, a USFWS-approved biologist will relocate CTS to suitable preserved habitat with authorization from USFWS personnel.

MM BIO-11.2: Off-site habitat conservation, either through a conservation bank and/or easement at a 3:1 ratio of suitable habitat for every acre of occupied aquatic or suitable upland CTS habitat within 2,200 feet of occupied aquatic habitat filled or removed, would reduce this impact to a less than significant level.

These measures may be modified by USFWS during the Section 7 consultation process.

Mitigation Measures for Impacts to Western Pond Turtles

Impacts to WPT shall be mitigated by implementation of Mitigation Measures BIO-10.3, BIO-10.4, BIO-10.5, BIO-10.6, BIO-10.7, BIO-10.8, and BIO-10.9 as well as by the mitigation measures described below.

MM BIO-12.1: To determine areas of aquatic habitat occupied by WPT, surveys shall be performed in all portions of the CVSP Development Area where suitable aquatic habitat exists, including Coyote Creek. Wherever possible, turtle habitat will be avoided and those areas containing the species will be preserved. If avoidance of aquatic habitat occupied by WPT is not feasible, a CDFG-approved mitigation and monitoring plan shall be prepared that includes methodology for capture, relocation, and monitoring of western pond turtles.

MM BIO-12.2: Development or disturbance in upland oviposition habitats (uplands within 200 feet of occupied aquatic habitat) will likely impact turtle nest sites. Any construction activity to take place adjacent to occupied aquatic habitat shall be surrounded by exclusion fencing to prevent turtles from entering the construction area and daily monitoring and repair of the fence shall occur.

Mitigation Measures for Impacts to Nesting Western Burrowing Owl

Impacts to nesting Western Burrowing Owls shall be mitigated by implementation of Mitigation Measures BIO-10.7, BIO-10.8, and BIO-10.9 as well as by the mitigation measures described below.

MM BIO-15.1: *Passive Relocation:* After pre-construction surveys and prior to construction, during the non-nesting season, any owls occupying burrows within construction zones shall be passively relocated under the authorization of the CDFG. Passive relocation involves the installation of one-way doors in all ground squirrel burrows occurring on the site. The one-way doors allow owls to leave their burrows but do not allow them to return, thereby forcing owls to move to a different area. Owl doors shall be monitored by a qualified biologist daily for a period of no less than three days and after installation, burrows shall be destroyed to preclude owls from returning to the burrows, and grading of these areas shall commence within seven days. The passive relocation shall be repeated if owls move back to the development areas.

MM BIO-15.2: *Active Relocation:* Prior to construction, during the non-nesting season, any owls occupying burrows within the construction zones can be actively relocated as partial compensation for impacts to on-site burrowing owl habitat. An active relocation would be preferred over passive relocation in the event that any off-site mitigation alternative for impacts to burrowing owl habitat is chosen. Although the CDFG has historically recommended only passive relocation, which is the preferred method of relocation, active

relocations may be considered if sufficient information can be provided that such active relocations have been successful.³⁵

Any active relocation effort would need to be undertaken under consultation with CDFG and under the guidance of a qualified biologist who is experienced with active relocation techniques and possesses the proper permits to conduct active relocations. Funding for any active relocation effort would be provided by the project proponent.

Active relocation would require the trapping and physical relocation of owls to established preserve areas that have been set aside in perpetuity for the conservation of burrowing owls and that have been determined by CDFG to provide suitable habitat for burrowing owls.

MM BIO-15.3: Burrows on the site that are occupied by owls shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies that either the owls have not begun laying and incubating eggs, or that juvenile owls have fledged and are able to live independently of their parents. If construction will occur during the nesting season, the project shall establish and maintain a minimum 250-foot buffer around any active nest.

Loss of Burrowing Owl Habitat Mitigation

If they are found to be feasible, the following measures would avoid/mitigate for the loss of Western Burrowing Owl habitat that would result from the development of the CVSP. These measures would be implemented if the City Council determines the measures to be feasible and requires them as conditions of approval. In the event the mitigation is determined to be infeasible, adoption of a statement of overriding considerations will be required.

MM BIO-15.4: *Avoidance:* Compensation for the loss of Burrowing Owl habitat typically requires that 6.5 acres be set aside per resident pair or per resident individual. Based on the number of owls occupying habitat at the time of development, complete avoidance of impacts resulting from a loss of Burrowing Owl nesting habitat would include setting aside an appropriate amount of conservation easements, with deed restrictions that guarantee preservation of the easement as burrowing owl habitat into perpetuity. As part of this measure, a Mitigation and Monitoring Plan would be developed and implemented in consultation with the City of San José and CDFG to manage the easement site for owls.

MM BIO-15.5: *Off-site Mitigation Within the Region:* Full or partial compensation for impacts to Burrowing Owl habitat can also occur in the form of purchasing sufficient credits at a mitigation bank that services the area, or purchasing and setting aside an appropriate amount of suitable habitat in the City of San José, or some combination of on-site and offsite mitigation that equals the appropriate amount of habitat required. If the mitigation is to be done

³⁵Researchers such as Pete Bloom in Southern California and Greg Clark in Arizona have reported success with active relocations of Burrowing owls (Burrowing Owl Consortium, 2004 and personal communication with Pete Bloom). CDFG staff person, Dave Johnston, has indicated that CDFG may consider active relocations in connection with the project.

partially on-site and partially off-site, however, it should be noted that relatively small habitat areas left on-site (i.e., less than 13 acres), would be considered insufficient mitigation unless they are contiguous with suitably protected open space areas. In the case of the CVSP Area, which is surrounded by rural and open space areas, contiguous open space areas may be available. Additionally, although it would lessen impacts to owls overall, complete or partial mitigation that occurs off-site and outside of the local area (i.e., outside of Santa Clara County) would result in a significant unavoidable loss of Burrowing Owl nesting and foraging habitat in the local area. At this time, there are no known mitigation banks within Santa Clara County that offers credits for Burrowing Owl habitat. There may, however, be vacant land available that is suitable as Burrowing Owl habitat elsewhere in Santa Clara County.

MM BIO-15.6: *Off-site Mitigation Outside of Region:* Impacts to Burrowing Owl habitat would be partially compensated through off-site mitigation outside of the region (i.e., outside of Santa Clara County), either by purchasing sufficient credits at an established mitigation bank or by purchasing and setting aside sufficient acreage of lands outside of the region for burrowing owl habitat management.

The implementation of either MM BIO-15.4 or MM BIO-15.5 (if lands were purchased locally) would fully and adequately offset/reduce impacts to Burrowing Owl habitat to a less than significant level. The implementation of MM BIO-15.6 alone would not reduce impacts to local Burrowing Owl habitat to a less than significant level; however it would further reduce impacts if implemented along with MM BIO-15.4 or MM BIO-15.5.

Mitigation Measures for Impacts to Golden Eagles

MM BIO-16.1: If Golden Eagle nests within one-quarter mile (1,320 feet) of the CVSP Area, disturbance to nesting eagles during the breeding season (typically February 1 to July 1) could occur as a result of increased human activity and use of heavy equipment during construction, and increased human activity and presence of development near the nest following construction.

Construction activities should commence during the non-breeding season (between September 1 and January 31) to avoid potential impacts to nesting eagles. If avoidance of the breeding season is not feasible, a qualified biologist shall conduct pre-construction surveys for breeding birds, including the Golden Eagle. If eagles are nesting within one-quarter mile of the CVSP Area, no ground disturbance activities shall occur within 1,320 feet of the active nest until all young are no longer dependent upon the nest. A biologist shall monitor the nest site weekly during the breeding season to ensure the buffer is sufficient to protect the nest site from potential disturbances.

Mitigation Measures for Impacts to Nesting Special Status Avian Species

MM BIO-17.1: Construction activities or removal of vegetation should commence during the non-breeding season (September 1 and February 28) to avoid potential impacts to nesting special status birds. If avoidance of the breeding season is not feasible, a qualified biologist shall complete pre-construction surveys for

breeding birds not more than 30 days prior to the onset of ground disturbance or tree removal. If active nests are observed, no ground disturbance activities shall occur within a 100-foot buffer zone for passerine birds, and 300-foot buffer zone for raptors and other non-passerine species. These buffer zones shall remain in place around the active nest until all young are no longer dependent upon the nest. A biologist shall monitor the nest site weekly during the breeding season to ensure the buffer is sufficient to protect the nest site from potential disturbances. A report summarizing the results of the pre-construction surveys and subsequent efforts to protect nesting raptors (if found to be present) shall be submitted to the City's Director of Planning, Building, and Code Enforcement for review.

Mitigation Measures for Impacts to California Horned Lizard

MM BIO 18.1: Pre-construction surveys shall be completed by a qualified biologist in habitat considered suitable for California horned lizard and subject to ground disturbance. If horned lizards are found, a mitigation and monitoring plan approved by CDFG shall be prepared and implemented by the applicant. The plan shall include details regarding trapping, relocation of the species to the nearest suitable habitat, and preservation of the habitat under a conservation easement.

Mitigation Measures for Impacts to Sensitive Bat Species

MM BIO-20.1: Pre-construction surveys for potential bat roost habitat shall be completed in all trees, rock outcrops, and buildings subject to removal or demolition for evidence of bat use (guano accumulation, acoustic or visual detections). If evidence is found, then acoustic surveys shall be performed to determine whether a site is occupied. A minimum of three surveys shall be completed between April and November under appropriate weather and nightfall conditions using an acoustic detector. Exclusion of bats from occupied roosts shall be done in the fall prior to construction. A qualified wildlife biologist shall be present during exclusion.

Mitigation Measures for Impacts to Breeding Bird Species

MM BIO-21.1: Implementation of MM BIO-17.1, as described above, would address potential impacts to breeding birds.

4.6.4.4 *Mitigation for Impacts to Trees*

Due to the overall numbers, sizes, and health of the existing ordinance-size trees in the CVSP Development Area, impacts due to tree removal are significant and unavoidable.

MM BIO-22.1: Implementation of the CVSP shall incorporate preservation of existing trees with emphasis on ordinance-size or larger native species and candidate Heritage Trees in good or better condition, to the maximum extent practicable, to the satisfaction of the City's Director of Planning, Building, and Code Enforcement.

MM BIO-22.2: In locations where preservation of existing trees is not feasible due to site constraints, trees to be removed by the project shall be replaced at the ratios shown in Table 4.6-10. Trees greater than 18 inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has first been approved for the removal of such trees.

TABLE 4.6-10 TREE REPLACEMENT REQUIREMENTS				
Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
18 inches or greater	5:1	4:1	3:1	24-inch box
12 - 18 inches	3:1	2:1	none	24-inch box
less than 12 inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree removal ratio				

MM BIO-22.3: The species and exact number of trees to be planted on the site during the construction phase shall be determined in consultation with the City Arborist and to the satisfaction of the Director of the Department of Planning, Building, and Code Enforcement.

MM BIO-22.4: In the event the developed portion of the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented at the development permit stage:

- An alternative site(s) shall be identified for additional tree planting. Alternative sites may include local parks or schools, or installation of trees on adjacent properties for screening purposes, to the satisfaction of the City's Director of Planning, Building, and Code Enforcement.
- A donation equal to the replacement/installation cost per replacement tree shall be made to *San José Beautiful* or *Our City Forest* for in-lieu off-site tree planting in the community. These funds shall be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting shall be provided to the City's Planning Project Manager prior to issuance of a development permit.
- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.

The measures below apply to the protection of all trees to be retained, including the Keesling walnut trees (IMPACT BIO-23) and candidate Heritage Trees.

MM BIO-23.1 and

24.1: Prior to the issuance of any approval or development permit, a Tree Preservation Plan shall be prepared by a certified arborist to the satisfaction of the City's Director of Planning, Building, and Code Enforcement for all

sites with trees. Information in the Plan shall include an inventory of all trees on the subject development sites as to size, species, and eligibility for Heritage Tree status. This information, the locations of all trees, and grading plans shall be submitted on a topographical map to the City's Director of Planning, Building, and Code Enforcement.

**MMBIO-23.2 and
24.2:**

Prior to the implementation of the CVSP, all trees shall be inventoried for Heritage Tree status, as defined by San José Municipal Code Section 13.32.140. To preserve and protect these trees of special significance, the inventory shall be presented to the City Council for approval. These trees could then be incorporated into the final CVSP.

**MMBIO-23.3 and
24.3:**

Implementation of the CVSP shall incorporate preservation of the Keesling walnut trees to the maximum extent practicable, to the satisfaction of the City's Director of Planning, Building, and Code Enforcement.

**MM BIO-23.4 and
24.4:**

The construction superintendent shall meet with the consulting arborist before beginning work to discuss the Tree Preservation Plan, work procedures, and tree protection.

**MM BIO-23.5 and
24.5:**

All trees to be retained shall be fenced to completely enclose the tree protection zone prior to demolition, grubbing, or grading. Fences shall be as approved by the consulting arborist and are to remain until all grading and construction is completed.

**MM BIO-23.6 and
24.6:**

Trees to be preserved shall be pruned to clean the crown and to provide clearance. All pruning shall be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

**MM BIO-23.7 and
24.7:**

No grading, construction, demolition or other work shall occur within the tree protection zone. No construction equipment, vehicles, or materials shall be stored, parked, or left standing within the tree dripline. Signs, wires, or other items shall not be attached to trees.

**MM BIO-23.8 and
24.8:**

No paint thinner, paint, plaster, or other liquid or solid excess or waste construction materials or wastewater shall be dumped on the ground or into any grate between the dripline and the base of the tree or uphill from any tree where certain substances might reach the roots through a leaching process.

**MM BIO-23.9 and
24.9:**

Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist. Appropriate

measures shall be taken to prevent exposed soil from drying out and causing damage to tree roots. (SJMC 13.32.130)

MM BIO-23.10 and

24.10: Supplemental irrigation shall be applied as determined by the consulting arborist.

MM BIO-23.11 and

24.11: If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.

MM BIO-23.12 and

24.12: As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore foundations, footings, and pavements on expansive soils near the trees shall be designed to withstand differential displacement.

MM BIO-23.13 and

24.13: A final report on tree protection measures, and the health of the protected trees, shall be submitted to the City's Environmental Principal Planner after grading and construction have been completed.

4.6.4.5 *Mitigation for Impacts to Wildlife Movement*

Impacts to the Coyote Creek wildlife corridor during the construction of the two bridges over the creek and impacts to existing land traversing wildlife migration corridors (Impacts BIO-9 and BIO-25) would be mitigated to a less than significant level with the implementation of MM BIO-3.1, BIO-5.1, BIO-6.1 through -6.3, BIO-9.1, BIO-11.1, BIO-11.2, BIO-12.1, BIO-12.2, BIO 15.1-15.6, BIO-16.1, BIO-17.1, BIO-18.1, BIO-20.1, BIO-21.1, BIO-22.1 through -22.4, BIO-24.1 through -24.13, as well as the mitigation measure described below.

MM BIO-26.1: The project shall include appropriate measures to facilitate wildlife movement through the CVSP Area. The design of new roads, overpasses, fences, and other linear facilities should, where possible, remove existing obstacles to wildlife movement and incorporate design elements to promote, where possible, wildlife movement through the Tulare Hill area and the Greenbelt. Such improvements or modifications can include enlargement of culverts beneath roadways, provision of areas for wildlife movement on overpasses, reduction in night time lighting near potential wildlife corridors, removal of barriers such as walls and fences near critical crossing areas, maintenance of naturally vegetated areas within protected open space areas to provide cover for various species, and other measures that eliminate barriers to movement in these two areas. The project shall include a minimum 100-foot buffer on either side of Coyote Creek and Fisher Creek that will be maintained with natural vegetation to promote movement of wildlife along these creek corridors and prevent potential interference of wildlife movement by domestic animals.

4.6.4.6 *Mitigation for Impacts Associated with Nitrogen Deposition*

Mitigation Measures for Impacts to Serpentine Grassland

The CVSP may have indirect impacts to approximately 149 acres of surrounding serpentine grassland areas in the foothills of the Santa Cruz Mountains, Santa Teresa Hills, Tulare Hill, and Coyote Ridge. The following mitigation measures will reduce direct and indirect impacts to serpentine grassland communities in and adjacent to the CVSP Area to a less than significant level.

MM BIO-27.1: Based on the mitigation ratio used for CVRP (3:1, preserved to impacted), the proposed CVSP project would be required to preserve a total of approximately 447 acres of serpentine grassland. This mitigation ratio may be adjusted in the future, based on best available science as advances are made in modeling the relationship between nitrogen emissions and nitrogen deposition.

To mitigate for potential indirect impacts to serpentine grassland as a result of nitrogen deposition, preservation of serpentine grassland shall be accomplished through establishment of a serpentine grassland preserve. In addition, a Preserve Management Plan shall be prepared or included in the development of the overall CVSP RMP. Management of the preserve should focus on alleviating potential effects of increased nitrogen deposition. The preservation of serpentine grassland for direct and indirect impacts to serpentine grassland may be combined, for establishment of one preserve area.

Mitigation Measures for Impacts Special Status Species

Implementation of MM BIO-8.1, 8.2, and 27.1 would reduce indirect impacts to serpentine grassland dependent special status species (Bay checkerspot butterfly, woolly-headed lessingia, Santa Clara Valley dudleya, fragrant fritillary, smooth lessingia, Metcalf Canyon jewelflower, most-beautiful jewelflower, Hom's micro harvestman, Jung's microblind harvestman, Edgewood blind harvestman, and Opler's longhorn moth, as described in Impacts 28, 29, and 30, to a less than significant level.

4.6.4.7 *Mitigation Measures for BOH Impacts*

MM BIO-31.1: Surveys of biological communities, including a Section 404 delineation of wetlands and waters, shall be completed within the BOH alignment area prior to roadway design to determine impacts to these communities. Implementation of MM BIO-6.1 through 6.3 may be required.

MM BIO-31.2: Mitigation Measures BIO-22.1 through 22.4 and BIO-24.1 through 24.11 would be implemented prior to and during construction of the future BOH roadway. The City's Director of Planning, Building, and Code Enforcement will determine, based on the number, sizes, and locations of the trees ultimately to be removed or potentially disturbed during construction, whether impacts would be reduced to a less than significant level.

MM BIO-32.1: A biological assessment report shall be completed within the BOH alignment area to determine whether the biological communities present have the potential to support special status plant species. Based on the results of the

biological assessment, focused rare plant surveys may be necessary to determine the presence or absence of special status plant species with the potential to occur in the BOH alignment area. If these species are found in the BOH Area, the population and supporting habitat will be preserved if feasible. If preservation is not feasible, populations will be transplanted to suitable habitat in a preserved area and monitored for a minimum of five years. Transplantation of populations may be accomplished by relocating individual plants or through seed collection and dispersal, or a combination of both, to be determined based on species habitat requirements and lifecycle.

Implementation of MM BIO-8.1 and 8.2 may also be necessary, depending on the roadway alignment and potential traffic impacts.

MM BIO-33.1: Future construction of the BOH roadway would be subject to San José 2020 General Plan policies as well as other measures to be considered at the time of development which would be similar to those described above in this section that relate to project-specific impacts. A biological assessment report shall be completed within the BOH alignment area to determine whether the biological communities present have the potential to support special status animal species. Based on the results of the biological assessment, focused surveys to determine the presence or absence of special status wildlife species may be necessary. If special status wildlife species are found in the BOH area, the population and occupied habitat will be avoided if feasible. If avoidance is not feasible, implementation of MM BIO-10.1 through 10.9, MM BIO- 11.1, BIO-11.2, BIO-15.1 through 15.6, BIO-16.1, BIO-17.1, BIO-18.1, BIO-20.1, and BIO 21.1 may be required.

MM BIO-33.2: To offset impacts to designated critical habitat for CTS and Bay checkerspot butterfly within the BOH area, the applicant shall provide off-site habitat conservation, either through a conservation bank and/or easement at a 3:1 ratio of like-habitat for every acre of critical habitat impacted. If critical habitat areas designated by USFWS do not contain suitable habitat for these species, no mitigation is necessary.

4.6.5 Conclusions regarding Impacts to Biological Resources

Impact BIO-1: The proposed project would result in the loss of agricultural fields, developed areas, non-native grassland, and coastal sage-chaparral scrub habitats. This is not a significant impact to biological resources. **[Less than Significant Impact]**

Impact BIO-2: The proposed project would result in the loss of approximately 163 acres (50,179 linear feet) of wetlands, streams, and ponds. Implementation of the mitigation measures described above (MM BIO-2.1 through 2.4) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-3: The proposed project would result in impacts associated with the potential for introduction of non-native species into Fisher Creek. Implementation of the mitigation measure described above (MM BIO-3.1) would reduce these

impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-4: The construction of groundwater recharge basins in the Greenbelt would result in impacts associated with the potential for introduction of non-native species into wetland, stream, and/or pond habitats. Implementation of the mitigation measure described above (MM BIO-4.1) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-5: The proposed project would result in impacts to approximately 28 acres of riparian habitat. Implementation of the mitigation measure (MM BIO-5.1 and 5.2) described above would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-6: The proposed project would result in the loss of approximately five acres of coast live oak woodland, 35 acres of valley oak woodland, and 23 acres of serpentine grassland habitat. Additional acreage may be impacted when water tank locations are determined. Implementation of the mitigation measures described above (MM BIO-6.1 through 6.3) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-7: The proposed project would not result in significant direct impacts to Mount Hamilton thistle. **[Less than Significant Impact]**

Impact BIO-8: The proposed project could result in the loss of habitat and take of bent flowered fiddleneck, big scale balsamroot, bristly sedge, and wooly-headed lessingia, if they are present within the CVSP Development Area. Implementation of the mitigation measures described above (MM BIO-8.1 and 8.2) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-9: The proposed construction of two bridges over Coyote Creek would result in significant short- and long-term impacts to central California coastal steelhead. Implementation of the mitigation measure described above (MM BIO-9.1) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-10: The proposed project could result in significant impacts to California red-egged frogs due to the loss of suitable aquatic habitat, creation of barriers to suitable habitat, and the direct loss of individuals. Impacts to foothill yellow-legged frogs could occur during construction of the bridges over Coyote Creek, if they are present. Implementation of the mitigation measures described above (MM BIO-10.1 and 10.2) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-11: The proposed project could result in significant impacts to California tiger salamanders due to the loss of suitable aquatic habitat, creation of barriers to suitable habitat, and the direct loss of individuals. Implementation of the

mitigation measures described above (MM BIO-11.1 through 11.9) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-12: The proposed project could result in significant impacts to western pond turtles due to direct take or indirect impacts. Implementation of the mitigation measures described above (MM BIO-12.1 and 12.2) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-13: The CVSP would impact USFWS designated critical habitat for the Bay checkerspot butterfly. However, no suitable habitat for the butterfly exists in the critical habitat areas within the CVSP Area. **[Less than Significant Impact]**

Impact BIO-14: The proposed project would not result in significant short- or long-term impacts to Great Blue Heron, Long-billed Curlew, or Tricolored Blackbird. **[Less than Significant Impact]**

Impact BIO-15: The proposed project could result in impacts to Western Burrowing Owls including take of the species, due to loss of individuals during construction, loss of habitat, increased predation, widening and construction of roadways and nest disturbance. Mitigation measures are described above (MM BIO-15.1 through 15.6) that, if determined to be feasible and made a condition of approval, could reduce this impact to a less than significant level. If the mitigation is determined to be infeasible, the project would result in a significant unavoidable impact and a statement of overriding considerations would be required. **[Less than Significant Impact if Mitigation is Determined to be Feasible and Made a Condition of Approval]**
[Significant Unavoidable Impact if Mitigation is Determined to be Infeasible]

Impact BIO-16: The proposed project could result in disturbance to nesting Golden Eagle due to construction activities, development, and increased human activity. Implementation of the mitigation measure described above (MM BIO-16.1) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-17: Although the project would not result in a significant loss of nesting habitat, it could result in impacts to special status avian species during the breeding season due to construction-related disturbance and increased human activity. Implementation of the mitigation measure described above (MM BIO-17.1) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

Impact BIO-18: The proposed project could result in significant impacts to California horned lizard due to the loss of suitable habitat and/or the direct loss of individuals. Implementation of the mitigation measures described above (MM BIO-18.1) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**

- Impact BIO-19:** Impacts to San Francisco dusky-footed woodrat would be less than significant because this species is common throughout the CVSP Area. [**Less than Significant Impact**]
- Impact BIO-20:** Although the project would not result in a significant loss of foraging habitat, it could result in impacts to special status bat species related to the disturbance of roost sites. Implementation of the mitigation measure described above (MM BIO-20.1) would reduce these impacts to a less than significant level. [**Less than Significant Impact with Mitigation Incorporated**]
- Impact BIO-21:** Although the project would not result in a significant loss of nesting habitat, it could result in impacts to common migratory bird species during the breeding season due to construction-related disturbance and increased human activity. Implementation of the mitigation measure described above (MM BIO-21.1) would reduce these impacts to a less than significant level. [**Less than Significant Impact with Mitigation Incorporated**]
- Impact BIO-22:** The proposed project could result in the loss of at least 888 ordinance-size and candidate Heritage Trees. Trees to be removed will be replaced at the ratios shown in Table 4.6-10 and implementation of the mitigation measures described above (MM BIO-22.1 through 22.4) would reduce these impacts. However, due to the number, sizes, and locations of these trees, their loss is a significant unavoidable impact and a statement of overriding considerations would be required. [**Significant Unavoidable Impact**]
- Impact BIO-23:** While the project proposes to protect the Keesling walnut trees during construction and in perpetuity, the loss of any of these trees due to removal or construction would be a significant unavoidable impact. Implementation of MM BIO-23.1 through 23.11 would reduce impacts, but not to a less than significant level. Adoption of a statement of overriding considerations would be required. [**Significant Unavoidable Impact if Keesling Walnut Trees are Lost**]
- Impact BIO-24:** The health of the trees to be preserved could be significantly impacted in the short-term by construction activities and in the long-term due to the proposed development. Implementation of the mitigation measures described above (MM BIO-24.1 through 24.11) would reduce these impacts to a less than significant level. [**Less than Significant Impact with Mitigation Incorporated**]
- Impact BIO-25:** The removal of riparian vegetation surrounding Fisher Creek may temporarily impact the availability of movement and dispersal corridors for flying wildlife species. [**Less than Significant Impact**]
- Impact BIO-26:** The proposed project could not result in significant impacts to existing terrestrial wildlife migration corridors. Implementation of the mitigation measures described above, including MM BIO-26.1, would reduce these impacts to a less than significant level. [**Less than Significant Impact with Mitigation Incorporated**]

- Impact BIO-27:** The proposed project could result in significant impacts to serpentine grasslands as a result of nitrogen deposition. Implementation of the mitigation measures described above (MM BIO-27.1) would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**
- Impact BIO-28:** The proposed project could result in significant impacts to Bay checkerspot butterfly as a result of nitrogen deposition. Implementation of the mitigation measures described in the previous section of this EIR would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**
- Impact BIO-29:** The proposed project could result in significant impacts to Santa Clara Valley dudleya, fragrant fritillary, smooth lessingia, Metcalf Canyon jewelflower, and most-beautiful jewelflower woolly-headed lessingia, a special status plant species, as a result of nitrogen deposition. Implementation of the mitigation measures described in the previous section of this EIR would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**
- Impact BIO-30:** The proposed project could result in significant impacts to special status invertebrate species, including Opler's longhorn moth, as a result of nitrogen deposition. Implementation of the mitigation measures described in the previous section of this EIR would reduce these impacts to a less than significant level. **[Less than Significant Impact with Mitigation Incorporated]**
- Impact BIO-31:** It is anticipated that the future construction of the BOH roadway would result in the significant loss of sensitive biological habitats and presumably ordinance-size trees in the alignment area. Therefore, the selection of an alignment and the ultimate design of this future roadway will be subject to the General Plan policies described in the introduction of this section of the EIR. In addition, it is assumed that mitigation measures similar to the ones described above, as well as MM BIO-31.1 and 31.2, would be considered at the time of development. **[Less than Significant Impact with Mitigation Incorporated]**
- Impact BIO-32:** It is anticipated that the future construction of the BOH roadway would result in significant impacts to special status plant species, including Santa Clara dudleya, if present in the alignment area. Therefore, the selection of an alignment and the ultimate design of this future roadway will be subject to the General Plan policies described in the introduction of this section of the EIR. In addition, it is assumed that mitigation measures similar to the ones described above, including MM BIO-32.1, would be considered at the time of development. **[Less than Significant Impact with Mitigation Incorporated]**
- Impact BIO-33:** It is anticipated that the future construction of the BOH roadway would result in significant impacts to special status animal species, including California tiger salamander and Bay checkerspot butterfly, if present in the alignment area. Therefore, the selection of an alignment and the ultimate design of this

future roadway will be subject to the General Plan policies described in the introduction of this section of the EIR. In addition, it is assumed that the mitigation measures described above, including MM BIO-33.1 and 33.2, would be considered at the time of development. **[Less than Significant Impact with Mitigation Incorporated]**